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WORKS
OF
DR JOHN BROWN.

THE
ELEMENTS
OF
MEDICINE.

CHAP. IX.

*A Comparison of the different Parts of the Sthenic
Plan of Cure with each other.*

281. As, in the sthenic diathesis, bleeding is the most powerful remedy of all others, being that which completely carries off a stimulus, as much more powerful than any other, as it is directly applied to a greater extent over the system conse-

quently, as often as the diathesis is very high, it should be freely used ; but never risked during predisposition, and sparingly, or not at all, ventured upon in diseases of a gentle nature, in which other remedies should be preferred (*a*).

282. THE next place of importance to bleeding, when heat and other stimuli are guarded against, is claimed by cold. Heat is always hurtful, and still more so after a previous application of cold ; but it is most hurtful, when it is also combined with other excessive stimulant powers. Cold is always of service, and in proportion to its degree ; provided foreign stimuli, blended with it, and overcoming its debilitating effect, be cautiously shunned.

283. THE third place in rank, after these reme-

(*a*) See above, par. 269. With the exception of peripneumony, phrenitis, and violent and mismanaged cases of the small-pox and measles, and rheumatism ; in the last in their mild state, as well as all the other sthenic cases, the lancet should never be unsheathed. That is to say, in seven cases out of ten even of the sthenic diseases, which are the only ones which either require or bear any degree of it, the practice must be laid aside, and never thought of in any asthenic affections whatever. Consequently, the cases, where it is in any degree allowable, are exceedingly few.

dies, is claimed by vomiting, and purging, and sweating. These evacuations have a powerful effect in removing sthenic diathesis, and therefore with great advantage, supersede the oftener imaginary, than real, necessity of profuse bleeding. They are often alone sufficient to restore the healthy state.

284. TOGETHER with all these, the articles of diet, the stimulant operation of which prevents the benefits to be received from them, should be sparingly used, and that in exact proportion to the degree of the diathesis. This precaution alone is adequate to the removal of predisposition, and often to that of diseases, especially those which depend upon a small and gentle diathesis.

285. ALSO with all the remedies yet mentioned we must conjoin rest, when the diseased state has taken place, and moderation in motion during the period of predisposition (*b*).

(*b*) So considerable a stimulus is exercise, that, in such a degree of sthenic diathesis, as that which forms only predisposition to the diseases depending on it, exercise may, of itself, be sufficient to effect the conversion of

286. THE practice of the common run of physicians is very bad, in going too much upon any one of the remedies which have been mentioned, and overlooking all the rest, or enjoining them carelessly. We are not to depend upon bleeding alone, not even in peripneumony itself; but employ all the rest either in concourse or succession.

287. THE disturbed functions, or those which are impaired (c) not from a debilitating cause, admit of the general plan of cure, and no other.

288. THE symptoms of debility, which are the consequence of the violence of the sthenic diathesis, in the progress of the disease, and which threaten death by indirect debility, ought to be prevented by an early interposition of the remedies.

289. THE same early cure serves to prevent suppuration, effusion, and gangrene, which arise from ultimately excessive excitement, passing into indirect debility.

the predisposition into the actual diseased state. Often has the highest of these diseases, and even peripneumony itself, been brought on by violent exertion in exercise.

(c) See above, par. 147. 151. 172.

v. If sthenic diathesis should happen to be conjoined with a local disease, the former, to prevent it from aggravating the latter, should be removed by its own respective remedies.

CHAP. X.

The same Comparison of the different Parts of the Asthenic Plan of Cure with one another.

290. IN asthenic diathesis, and the diseases depending upon it, reproducing the lost quantity of blood is the most powerful remedy, when we, at last, find access to it, as being the only means of restoring a stimulus of so much more power and efficacy, that its direct application is made to so great an extent of the system (*a*). For which reason, as, in every degree of debility, the quantity of food, from which only blood is made, which is taken and digested, is always in an inverse proportion to the degree of debility (*b*); so much, and of such a form, as can be taken and digested, should immediately, and without loss of time, be administered. On which account, if the debility be moderate, giving solid animal food sparingly each time, but often repeated, is proper and suitable. When the debility

(*a*) Compare this with par. 281. above, and with all the paragraphs from 131. to 136.

(*b*) Or in a direct proportion to the degree of excitement.

is greater, and solid animal food can neither be taken, nor, if taken, digested, broth made from it, as rich as possible, and as free of fatty matter, should be carefully administered (*c*). With this view, to excite the stomach, and render it more fit for receiving and digesting the food just now mentioned; the diffusible stimuli, such as different kinds of wine, and more particularly still, opiates, and other remedies of similar powerfulness, ought to be constantly employed; sparingly at first, and afterwards more fully, if the debility be direct: after which, the use of the diffusible should be gradually laid aside, and, in the same gradual way, recourse be had to a larger and larger use of the more durable and natural stimuli (*d*). In the case of indirect debility, we should also gradually proceed from the highest to the lowest force of stimulus, as has been mentioned formerly (*e*), and, in an inverse manner, go on from the smallest force of durable stimulus to the greatest. Lastly, in that moderate debility, which constitutes the predisposition to asthenic diseases, it must always be kept in mind, that an abundance of blood is the greatest support of health (*f*),

(*c*) Compare this with par. 272.

(*d*) See last Note (*e*), and compare it with this.

(*e*) Par. 103.

(*f*) How widely different is that maxim from any which

and that we are not to give way to a weakened appetite (*g*).

291. To the vital fluid, and the several means of increasing its quantity, which have just now been mentioned (*b*), the next remedy, in the cure of asthenic diathesis, is heat; as being the power by which animals (*i*), in their first formation, in their growth, and most especially in their decay, are brought forth into existence, are nourished, and acquire vigour, and afterwards, through the several degrees of their declining state, are to some extent upheld, till their excitement is all extinguished (*k*). By heat, understand that point of external temperature, which intervenes, as a mean, betwixt cold,

have hitherto ever been received in the profession of physic; in which, flying to the use of the lancet was the first thought which arose in the mind, with respect to the idea of cure of every disease; and bleeding and evacuations, through the course of each disease, the only remedies.

(*g*) This is equally the reverse of the general practice of inanition in almost every disease, without a single exception.

(*b*) The addition in MS. to the text for these last words is, “et relatis ejus copiam augendi rationibus.”

(*i*) And we may add vegetables.

(*k*) Compare this with par. 112. and 254. and 260.

as it is called, and high heat (*l*) ; under which our sense of temperature is agreeable and pleasant ; under which the body is neither weakened by that relaxation which produces sweat, nor by that torpor (*m*) which cold begets, where the debility is, in this case, direct, and in the former, indirect ; under which, the functions of the whole body are excited, called forth, and, as it were, cherished in the sun beams ; without which, all other stimuli are of no effect (*n*).

292. SUCH a temperature as that is suited to every state of the body, but still more to its different states of debility ; because, in the latter case, as the excitement is deficient from other sources, there is so much more occasion for this stimulus, which is much more easily procured than many others, to supply such deficiency. Hence, both in other dis-

(*l*) The Latins have a single word for this, which we want ; the word is *ardor*.

(*m*) or benumbed state,

(*n*) It is plain, that though all the other powers should be in full action upon our bodies, and that with the effect of keeping up in them a due degree of excitement over all ; yet plunging any person naked into a dense medium, suppose that of water, in a degree of cold at or under the freezing point, will most certainly, in an instant, put an end to life.

eases of great and direct debility, and particularly in fevers, heat is found to be of the greatest benefit, and, above all others, in such complaints of that kind, as cold has had any share in producing (*o*). In the same diseases, cold must be most carefully avoided, as it is always of a directly debilitating operation, and never of service but in sthenic diseases, and those which are in their progress to indirect debility (*p*). We must be equally on our guard, in every degree of asthenic diathesis, against excessive heat; which is equally debilitating as cold, and equally productive of atony, laxity, and gangrene of the vessels, as well as stagnation and corruption of the fluids, in consequence of the inactive state of the vessels (*q*).

293. As refilling the vessels is the greatest remedy, because its direct stimulus is applied over

(*o*) See again, par. 260.

(*p*) The operation of cold has been so widely mistaken by all physicians, that it comes to be of the greatest consequence to understand the several propositions stated in this work with regard to it. For that purpose, consult par. 37. and the Note upon it marked *θ*, as well as par. 260. and all that has been said upon the subjects of either heat or cold in Chap. I. of the Second Part, from 112. to 123. as also par. 120.

(*q*) With this proposition compare 115. 117. and 118.

such an extent of the system; for that reason, heat, which is immediately applied to the whole surface of the body, and directly affects the body to that extent, should be next in virtue to it.

294. SINCE vomiting, purging (*r*), and sweating (*s*), are so powerful in debilitating, as to claim the third place of rank in the sthenic cure; they must, for that reason, by the same debilitating operation, be equally hurtful in asthenic diathesis, and the stimuli which stop their operation; and, consequently, both the other stimuli, and particularly the diffusible ones, equally serviceable.

295. To run over the list of stimuli which answer this purpose, we must begin with the cure of that slighter loss of fluids, which occurs in those diseases, and proceed to the more violent kinds of them.

IN a slight looseness of belly, such as happens in predisposition to asthenic diseases, or in the slighter degrees of the latter; it will be commonly sufficient to abstain from vegetable food, and from weak, watery drink, or that kind of it which fer-

(*r*) See par. 283.

(*s*) See par. 255.

ments in the first passages, such as the several drinks made from barley, called beers; to use animal food, as well seasoned and as rich as possible, and free of all fatty matter: to drink pure wine, or spirit, in different degrees of strength; and to take such exercise as is gentle in degree, and often repeated (*t*).

296. WHEN the belly is still looser, and with that affected with gripes and pains, as happens in the violent diarrhœa, and in the dysentery, in which the loose stools are accompanied with vomiting; or when, without these troublesome symptoms affecting the belly, distressing vomiting is an urgent symptom; or, when the vomiting is conjoined with a moisture upon the surface, or macerating sweat; or when sweat is the only urgent symptom, and, as such, wastes the strength, exhausts the body, and dissipates the fluids: in all these cases, we must have immediate recourse to the most diffusible stimuli, and check such an impoverishment of the fluids of the system.

297. IN which case, the use of stimuli will be so

(1) See and compare, for the more clear understanding of this paragraph, the 266. 268. 273.

much the more necessary, that other symptoms usually accompany those increased excretions. Their great efficacy, and stimulant power, is proved by their singular virtue in removing those, and other symptoms in fevers, and other most violent asthenic diseases, nay, in the article of death itself, from ultimate debility.

298. ACCORDINGLY, in spasms and convulsions, in the internal, in the external parts (*u*), in bleeding discharges (*x*), in the direful delirium of fevers, and other very violent diseases (*y*), in asthenic inflammation (*z*); when those stimuli, which have a more permanent influence, fail, or act to no good purpose; the virtue of the diffusible stimulants, the principal of which is opium, is eminent.

299. As, therefore, the energy of that stimulant virtue serves to check looseness of the belly, and vomiting, or even sweating, when these symptoms are gentle, and depend upon a less violent degree of the cause; so, that degree of its power, which is

(*u*) See par. 195. 196.

(*x*) See par. 134. χ . ψ . and 232. and the subjoined notes.

(*y*) See par. 198. 200. 201.

(*z*) See par. 204. to 212.

fitted to check these affections in the greatest height of their violence, and to re-establish the state of health, is by far the greatest of all the powers which are ever applied to the human body ; which may be known from this proof, that, when the action of all the other powers by which life is supported is of no effect, they turn aside the instant stroke of death.

300. THE most weak degree of the diffusible stimuli (*a*) are, the white wines, except madeira, canary, good sherry ; and the red wines, except port, and spirits produced by distillation, so diluted, as to equal the strength of the wines, or exceed it a little. Still higher than these, are the latter taken pure ; and higher still, those which have undergone many rectifications. The strength of which is in proportion to the quantity of water expelled, and of the alcohol retained.

301. A HIGHER place in the scale is claimed by musk, volatile alkali, camphor ; our trials of which are not yet so complete, as to ascertain its force exactly : next comes ether, and, last of all, opium (*b*).

(*a*) See above, par. 126. σ . π . ρ . ς .

(*b*) A few words with respect to the rank of ether in the scale are erased, as not being correct in point of fact,

Of all which, however, unless when, as they sometimes do, they have lost their effect by a continuance of their application, and are therefore substituted in place of each other, for the sake of a renewal of the operation of each; and when, in that way, we make the complete round of them, for the sake of repelling extreme debility; in every respect, the preparations of opium are sufficient for most purposes of high stimulating (*c*).

302. TOGETHER with all these (*d*), regard must be had to the articles of diet (*e*). And as, in great debility, and the diseases depending upon it, of the only suitable matter, that is, meat, nothing solid can be taken; for that reason, the matter to be used must be fluid, but strong. Animal soups should be given sparingly at a time, but repeatedly, in proportion to the degree of debility, and jellies, both along with the diffusible stimuli. After that, when, chiefly by means of the diffusive stimuli, the strength is in part restored; at first solid meat, likewise in sparing quantities, but often repeated; then given

(*c*) The original is corrected as follows, "*opii formæ satis in plerosque altius stimulandi usus sunt.*"

(*d*) They are animal soups, and solid meat (290); heat, (291); stimulants (295); diffusible stimulants (299).

(*e*) See par. 284.

more plentifully, and at greater intervals, should be taken. In which progress, the patient should gradually recede from the use of the diffusible stimuli.

303. WHEN now the diffusible stimuli are altogether laid aside, and the convalescent is given up to his usual diet, his usual manner of living, and that management, which persons in health commonly observe (only that more care is taken, than in perfect health, to avoid any thing which might prove hurtful); then it is, that every attempt of the physician should be directed to the consideration of the strength of his patient, as returning, but not yet quite established (*f*). In his movements, he should first use gestation, and then gentle, but frequent, exercise, and the latter should always end in some, but not an high, degree of fatigue. His sleep should neither be too long, nor too short, lest the former produce direct, the latter indirect, debility (*g*). The most nourishing food should be taken, but not in too great a quantity, lest the excitability of the stomach be worn off, without the attainment of a due degree of vigour; but it should be often taken, in order to reduce the excitability gradually, which

(*f*) See above, par. 105. and 109.

(*g*) See par. 242. and sequent.

only serves to produce proper vigour, and reduce it to its half wasted state (*b*) ; that degree of heat, which stimulates, should be employed (*i*), and both excess of it, as well as cold, as they are equally debilitating, should be avoided : the patient should breathe pure air, and avoid impure : he should keep his mind in gentle action, observe moderation in his passions, and court agreeable objects of sense : he should have no companions around him, but agreeable ones, and be in frequent gay entertainments : he should travel through a pleasant country, and be moderate in love. Neither is the management of the senses, and any return of contagious matter, to be neglected (*k*).

(*b*) See above the 24. 25. and 26.

(*i*) See par. 112.

(*k*) The last sentence is an addition to the original.

CHAP. XI.

How the Remedies should be varied.

304. As the hurtful powers, which produce pre-disposition to diseases, or diseases themselves, act, some on one part, some on another, with somewhat more force than on any other equal part; and as such a part is commonly that which they directly affect (*a*); so, the powers which are employed as remedies, in order that their general effect may reach the whole body with the more certainty, should be, in the same manner, differently applied to different parts.

305. THE cure of any sthenic disease whatever, is improperly entrusted to bleeding alone, though that is one of the most powerful of the debilitating remedies. And the reason is, that, though the excitability is sufficiently reduced by that remedy in the greater blood-vessels, perhaps too much; yet in the extremities of these, as well as in the rest of the body, it is not sufficiently reduced (*b*). Nor is the

(*a*) Par. 49.

(*b*) The action of every exciting power, whether salu-

alternation of bleeding with purging a perfect sort of cure ; because, though the excessive excitement be sufficiently, and more than sufficiently, removed in the greater blood-vessels, and in the innumerable small arteries, whether exhalant or mucous, which discharge their fluids into the intestines ; yet, neither on the perspiratory terminations of the arteries, nor on the rest of the body, is an equal debilitating energy exerted. For instance, the small vessels which open into the stomach, are not sufficiently relieved of their distending (*c*) load. And although vomiting (*d*), which has been improperly left out of the cure of sthenic diseases, and still more im-

itary, or hurtful, or curative, always extends over the whole body, the whole seat of excitability, but still with the inequality mentioned in the Fourth Chapter of Part First. This is the basis of the distinction with respect to the present subject : which is, that, as every power acts most effectually on the part where its action is immediately exerted, it is better to trust to a number, every one of which possesses that advantage, than rely on any one, however powerful otherwise ; as, by that means, whatever be the indication, whether it be to increase or diminish excitement, the effect will be more equally produced over all in consequence of there being a number of parts which have had a strong action exerted upon them.

(*c*) and, therefore, stimulating load, the stimulus in any vessel being the quantity of its fluid.

(*d*) See paragraph 269.

properly employed in every one of the asthenic, should be conjoined with the two remedies just now mentioned, even that would not be enough to produce an equality of diminished excitement ; as there would still remain, in the perspiratory vessels, the same state of the excitement, which has been mentioned, as in the rest of the body which is not vascular. In violent sthenic diseases, therefore, after diminishing the diathesis, and in the slighter, from the beginning of the disease, the addition of the operation of sweat to the evacuations which have been spoken of, will produce a more equal diminution of excitement, a more perfect solution of the disease. For, by means of this evacuation, not only from the larger blood-vessels, in the interior parts of the body, but from an infinity of outlets, both of the external and internal surface of the body, an immense quantity of fluids, every where distending, and thereby producing a very great sum of excitement, is withdrawn. But the matter stops not even here : For since, in slight sthenic affections, much nourishing food, and in them all, too much, can be taken ; the consequence of which must be, that, however much the quantity of the blood and other fluids has been diminished, if the food, which is the only power that can produce blood, continues to

be taken, all the vessels, in proportion to the quantity which has been taken, will again go on to be filled, and to be fired with the fuel of excessive excitement. To prevent which inconvenience, and to diminish excitement, still with greater equality over the system, abstinence, or an allowance of vegetable matter in a fluid form, and watery drink, will have a very great effect. But neither does the matter end here : For if, after taking all the precautions and securities which have been recommended, the degree of heat, which proves hurtful from its stimulus, be allowed to approach the external surface of the body ; it will produce another inequality of excitement, however much that may have been properly and equally diminished by the other means of cure. Wherefore, as the sthenic diathesis depends so much upon the stimulus of heat, directly affecting the skin (*e*), and is, on that account, prevalent in the skin in preference to other parts ; to make sure of rendering the diminution of excitement as equal as possible, the debilitating effect of cold should be opposed to the high degree of excitement, which the heat has produced. When, at last, all the directions, which have been so fully pointed out, have been executed, still, to re-produce

(*e*) See paragraph 113,

the equality of excitement, suited to good health, it remains, that we be on our guard against the stimuli which arise from the intellectual functions and passions. For, as they have a great effect in producing sthenic diathesis (*f*); so, the guarding against them, or prevention of them, must be equally effectual in removing that diathesis, and in reproducing that equality of excitement, upon which health depends (*g*).

306. IF the cure of sthenic diseases hitherto has consisted in bleeding, purging of the belly, and in the use of refrigeration in a few cases; and if the other objects of attention, which have now been so fully considered, have either been totally neglected, or mentioned in a slight way, by the by, and as if they had been of no consequence, and, in the cures which were prescribed in that way, not reduced to any principle; it will easily now appear, from what has

(*f*) See paragraph 138. 140.

(*g*) As the most healthy state of man is occasioned, not by the operation of any one, or of a few exciting powers, but by the united operation of them all; so, neither is its re-establishment to be effected, but by the same united operation of all the remedies, the last of which come to be the ordinary means of the support of the healthy state.

been said above, and in other parts of this work, how much the knowledge of those diseases has been improved, both in the practical and reasoning part : and it will now, at last, be found a certain and established fact, that both the nature and true theory of sthenic diseases, as well as the practice of the cure of them, considered either as an art, and imitative, or as rational and scientific, has been discovered and demonstrated.

307. As the debilitating, or antisthenic (*b*), remedies, are the same with the asthenic hurtful powers (*i*) ; so, the sthenic remedies (*k*) are also the same as the sthenic hurtful powers.

φ. AND as the remedies of asthenic diathesis (*l*), to whatever part they are applied, also stimulate

(*b*) See paragraph 90.

(*i*) See paragraph 304. to 307. the present one.

(*k*) See paragraph 91.

(*l*) All from the number 307. to this reference, or in the original to “ recta admoventur,” is a correction of the original in these words, “ Ut auxilia debilitantia, seu antesthenica (90) ; eadem, quæ noxæ asthenicæ (304. ad 307), ita auxilia sthenica (91) ; eadem quoque, quæ noxæ sthenicæ, sunt. Utque diatheseos asthenicæ remedia, cuicunque parti,” &c.

that part more than any other ; some of them one, others another part, and increase the excitement ;

308. So, in asthenic diseases, if we want to rouse the excitement with more equality, and restore the lost strength, we must not depend upon the most diffusible stimuli alone (*m*). For, while they, indeed, increase the excitement over the whole body, at the same time, they produce that effect in the stomach with greater force than any where else. Hence, even from the beginning of the cure, when almost no food can be taken, and other durable and more natural stimuli (*n*) are most imperfectly applied ; yet, together with the diffusibles, soups (*o*) should be given, and as much haste as possible should be made to bring the patient to take solid meat ; while care, at the same time, should be taken to apply a proper degree of heat. For, by this method, we most properly secure both the internal and external surface. Nay, in the same way, we remove that inanition of the vessels which takes place in asthenic diseases, in an exact proportion to their

(*m*) See paragraph 301.

(*n*) as that of pure air, exercise, the stimulus of the motion of the blood and other fluids in their respective vessels,

(*o*) See paragraph 302.

degree. For as, in that abundance of blood, which is the most powerful means of bringing on sthenic diseases, there is an opportunity of making a quick cure by the immediate taking of blood; so, it is only by insensible, gradual, imperceptible (*p*), and obscure successive steps, that we open the access to the removal of that penury of blood, which proves the most hurtful power in asthenic diseases, and effect the filling of the vessels again.

309. AFTER this management of both surfaces of the body, and this partial filling of the vessels; still the excitement is not equally enough increased. To effect this further in part; at the same time, some most diffusible stimulus, suppose any preparation of opium, should be administered, and the little animal food, or meat, for which there is any appetite, and which can be taken and digested, should be added. The idea of giving food is evident from the late explanation given about soups (*q*). But, the use of the more durable, and less diffusible, stimulus, depends on this, “that when the excitability is worn out by any one stimulus, any new stimulus finds excitability, and draws it forth, and thereby produces a further variation of the effect.”

(*p*) “et cæca serie” is added in MS.

(*q*) See par. 308.

310. HITHERTO, the stimulus of the motion, by which all the muscles, which, from their situation on the surface of the body, by their contractions propel the blood along the veins to the heart, are thrown into action, has not been supplied (*r*); and, therefore, both upon account of the emptiness of the vessels, and the slow circulation from the want of that impulse, the excitement is not sufficiently aroused over all that tract. After the strength, then, has been so recruited, that rich food can now be taken, the body can now be roused, first by foreign, then by its own organs, of which the former is called gestation, the latter exercise, and also refreshed by air; when all that has happened, then it is, that the excitement is further raised in several points, and becomes more equal upon the whole.

311. THE last stimuli to be noticed, which, along with those already mentioned, have a natural tendency to produce an equalisation of excitement over the whole system, arise from the action of the mind, the energy of passion or emotion, and a still greater purity of air, than is attainable by persons shut up in a room (*s*). In this state of convales-

(*r*) See par. 137. α . ϵ . γ . δ . 273. 303.

(*s*) See and compare, with these last mentioned stimuli, the following paragraphs 275. 378. 279. π .

ence, the same management, which was formerly mentioned upon the going off of sthenic diseases, perfectly applies (*t*).

312. THE stimulant plan of cure, in all its parts, is new, whether the reasoning part, or the merely practical, be regarded ; and whether the cause and the exciting hurtful powers, or the indication of cure and the remedies, be considered. May it, therefore, be put as a question, Whether the whole doctrine, which has hitherto been delivered, has, at

(*t*) The convalescent state from either of the two general forms of diseases, or from local ones, the effect of which had drawn the whole system into consent, is much the same ; being a state of some remaining debility in all ; in the sthenic from the excitement either going too low, by the remedies being pushed to some excess, or not equally diffused over all the parts in consequence of the natural supports only beginning to be brought fully into play ; in the asthenic, from the perfect point of health being not quite gained, either from the stimulant remedies not having been carried exactly up to 40, or from some of them having been carried further than the wasted excitability could receive them with invigorating effect, and thereby an inequality left upon the whole. The convalescence, from the general effects upon the constitution, sometimes arising from local diseases, is to be explained upon the principles laid down, with respect to the two other cases of convalescence.

last, brought forward clear proof, that the art of medicine, hitherto conjectural (*u*), inconsistent with itself, altogether incoherent, is now reduced to an exact science, proved, not by mathematical principles, which is only one kind of probation, but by physical ones, and established by the certain testimony of our senses, nay, and by the very axioms of the mathematical elements ?

(*u*) Celsus says, “*ars nostra conjecturalis est.*” And every man of sense, whether of the profession, or out of it, has held the same sentiments of it. Nothing is more glaring than the contradictions in medical writings and reasoning of every kind, nothing ever could be more incoherent. If a piece of knowledge, which sets out with a fixed principle, which applies to all the parts of the detail, while they reflect on it both illustration and confirmation, be entitled to be considered as a science, the reader is desired to consider, how far that criterion will apply to this doctrine. The pedantry of mathematicians has contributed as much to bring their science into disgrace, as any other circumstance, particularly in allowing no sort of probation, but that which is made out by lines and diagrams ; while, except the elements of that science, every application of that department of knowledge has led to as many false conclusions as any other. If they will not allow the proof, which arises from our feelings, compared with those of all men, whose organs of sense are not deranged, what will they make of their own axioms ? They must admit of other probation ; while human reason holds its reign, truth and falsehood will be discriminated, without regard to such empty and useless prepossessions.

CHAP. XII.

As the Action of all the other Powers, which act upon living Bodies, is the same, that that of the Remedies is also the same.

312. As it is found certain, and proved, that the common effect of all the exciting powers is precisely the same, to wit, the production of the phenomena peculiar to life, that is, that sense, motion, intellectual operation, and passion and emotion, are the same: For what else is the effect of heat, of food, of seasoned food, of drink, of the blood, of the colourless fluids secreted from it, and of the air, among external bodies? what else, in the functions of the living body itself, is the effect of muscular contraction, of thought, of the passions, and of sensation, but to excite, preserve, and continue as the sustaining cause of those functions in common to animals? And, as it is from that evident, that the operation of all the same powers is also the same (for it must be granted, that the same cause, by an universal law in nature, tends to the same effect (a):)

(a) See paragraph 20. with the annexed Note.

and, further, as the operation, betwixt cause and effect, depends upon stimulating (*b*), and that stimulus produces all the phenomena of life, health, disease, and those intermediate degrees between both, which are called predispositions (*c*); from these certain and demonstrated facts, it follows, and must be admitted, that the operation of the remedies, both in sthenic and asthenic diseases, is the same. For, if there is no difference betwixt health and sthenic diseases, except an excess of excitement in the latter, and none betwixt the former and asthenic diseases, but deficient excitement in these last, what else can the operation of the remedies, to remove sthenic diseases, be, but to diminish, and of those which remove the asthenic, but to increase, the excitement (*d*)?

313. WHATEVER thing produces the same effect as another, or several things, it must be the same thing as each of them, each of them the same thing as it, and every individual of them, the same thing as every other individual.

(*b*) See 19. and 22.

(*c*) See 23.

(*d*) See 88.

ξ. IN sthenic diseases, bleeding (*e*), cold, vomiting, and purging (*f*), sweating, abstinence (*g*), rest of body and mind (*h*), tranquillity with respect to passion, all those restore health by nothing else but a diminution of excitement.

314. IN asthenic diseases, the administration, first, of diffusible stimulants, for the purposes of gradually bringing back the appetite for the greatest remedy, food, as well as keeping the food upon the stomach, and of assisting in the digestion of it (*i*); then the application of heat (*k*); then the use of the less diffusible and more durable stimulants, as animal food, without and with seasoning, wine, gestation, gentle exercise (*l*), moderate sleep, pure air, exertion of mind, exertion in passion and emotion, an agreeable exercise of the senses; all those reproduce health, by no other operation but that of only increasing excitement.

(*e*) See 281.

(*f*) See 283.

(*g*) See 284.

(*h*) See 285.

(*i*) See 294. to 302.

(*k*) See 302.

(*l*) See 302: 303.

CHAP. XIII.

That all the Powers, which support any Sort of Life, are the same ; or the fundamental Principle of Agriculture.

315. AGAIN, are not the powers, which produce perfect health, the same as those, which, by an excess of force, produce sthenic diseases, by a deficiency of force, asthenic, as well as the predispositions to both ;—are they not the same, with no other variation but that of degree (a) ?

316. FURTHER, as we learn from the whole doctrine delivered above, that the hurtful exciting powers, which produce sthenic diseases, are the remedies of asthenic ; and that those which produce the latter, are the remedies of the former (b) :

317. ALL the powers, therefore, which support any state of life, are the same in kind, only varying in degree ; and the proposition is true, of every

(a) See 23. 73.

(b) See 89. 90. 91. 93. 94.

sort of life, to its full extent over the animal creation.

SUCH is the life of animals (*c*). Concerning which, all that has been said applies to the life of vegetables.

318. ACCORDINGLY, as animals, in every state of life, have their exciting powers (*d*) in predispositions and diseases, their hurtful exciting powers (*e*) in the cure of both those, their indications, and remedies adapted to each (*f*); all which, in every respect, is precisely the case in plants:

319. THE powers which support plants, in every state of life, are heat, air, moisture, light, some motion, and their internal juices.

320. THE action of plants also consists in stimulus (*g*); by means of which, the phenomena peculiar to that sort of life, sense, some motion, and verdure, are excited: and the cause of this state is

(*c*) See from 10. to 13. inclusive.

(*d*) See 62. 67. 68. 69. 73. 112. to 147.

(*e*) See the same.

(*f*) See 88. 89. 90. 91.

(*g*) See 17. 19. and Notes.

excitement, an effect in common to all exciting powers (*b*).

321. *NAY*, in this case, too, the exciting powers, when applied in due proportion, produce health; but their too great, or too sparing action, occasions diseases, or predisposition to diseases; of which the former depend on an excess, the latter upon a deficiency, of stimulus. Accordingly, excess or scantiness of moisture, excessive heat or cold, by an equality of hurtful operation, lead to disease and death, indirectly or directly. And, as the rays of the sun or darkness, when their operation is either too great, or too long continued, prove debilitating, the former indirectly, the latter directly; so, the alternate succession of night to day, of darkness to night, seems to be the effect of an intention in nature, to prevent too great an effulgence of the light of day, or too long a continuance of it, from stimulating either in excess or in ultimate excess, and thereby inducing sthenic diseases, or those of indirect debility; or to prevent an excess, or long continuance of darkness, from producing direct debility, and the diseases peculiar to it (*i*).

(*b*) See Part I. Chap. II.

(*i*) Chap. IV. We have no less proof, than that of

322. NOR do plants want their excitability, which, equally as in animals, “ is not different in “ different parts of its seat ; nor is it made up of “ parts, but one uniform, undivided, property over “ the whole system (*k*).” The effect of which is, that, to whatever part of a plant any exciting power is applied, its operation, whether in excess, in due proportion, or in under-proportion, immediately affects the excitability over the whole.

323. THIS effect is also produced with the same inequality as in animals, being, for instance, greater in any part to which its exciting power is directly applied, than in any other equal part. And, as there are two reasons for that fact in animals, the direct impression of the power upon the part more affected, and a greater energy of the excitability of a part or relation to which it is so applied, than on that of any other equal part (*l*) ; the very same is the fact with respect to plants. Further, as the excitability bears a greater relation to the impression of the exciting powers, on the brain, the stomach,

the universal feeling of mankind, of the truth of what has been advanced, with respect to the stimulus of light, and the debilitating effect of darkness.

(*k*) See Part I. Chap. IV.

(*l*) See 49. and addition 50. 51.

and intestines, than on any of most of the other parts ; so, the part in plants, which corresponds to these parts, is the root, which is affected in the highest degree by the exciting powers. It is the root of plants, in preference to any of their other parts, to which the conflux of moisture is made. The heat there is the best, which is neither excessive, and therefore liable to produce sthenic affection, nor ultimately excessive, and therefore ready to induce indirect debility (both which disadvantages are prevented by the depth of the ground); nor deficient, or what is called cold, which would bring on direct debility (*m*).

324. BUT the only use of the soil, through the

(*m*) Hence it would appear, that it should be a general rule, in ploughing and harrowing, to adapt the depth, where the seed is to be laid, to the state of the surrounding temperature. It would seem, when other circumstances are equal, that the seeds of plants may more safely lie superficially in warm, than in cold countries. The same fact seems to be favoured by the difference of perfection which planted and natural woods attain in cold countries ; the former, the seeds of which are lodged in a certain depth, turning to better account than the latter, which rise from seeds that have randomly been scattered upon the surface. Might not the hills in the west of Scotland, upon some such principle, be made useful oak forests ?

pores of which the powers that have been mentioned penetrate, is to furnish that sort of a strainer, by which the powers may neither, from the pores being too patulous, go down in too great quantity, and produce, first a sthenic, or too luxuriant a state of the plant, and then indirect debility; nor, from the contractedness of the pores, be insufficiently admitted to the root, and occasion direct debility, or the decaying state of a plant. But that the soil is not otherwise necessary to the production of some degree of vegetable life, is proved by plants often living, to a certain degree, in pure water. That, however, it is useful as a filter, is proved by the good effect of ploughing, of breaking the clods, of dividing the tough clay by lime and other absorbent earths, and by these means relaxing the pores. On the other hand, we have proof of the same thing in the success of contracting the pores by making ground, naturally too friable, more tenacious with dung, and covering light ground with rags and stones, and thereby keeping in both heat and moisture.

325. FROM this view of the facts, the reason is evident, why every sandy, as well as clay soil, when the former has not received, and the latter parted with its toughness, is barren and unfruitful. Hence

it is, that very hot summers and countries are hurtful to clay grounds, by shutting up the pores ; and serviceable to friable and lean grounds, by diminishing their porosity. Hence, dry seasons are suitable to low-lying rich grounds, which, from all quarters, conduct a quantity of moisture around the roots of the plants ; while rainy seasons are those which answer in grounds which are high and of a thin soil. Declivities facing the north, which are commonly of a thin and poor soil, are cherished and protected by hedges and clumps of trees, and a great number of bare stones, covering every thing, which some persons, of more industry than sense, often remove with hurtful effect ; their good effect being to give heat, and keep in moisture. But in those places, the declivity of which looks towards the south, there is not equal occasion for such protection from cold and dryness, as they, from their more happy situation, are cherished by the sun, defended from the cold winds, and exposed to those which blow from the southern points which are seldom too dry (*n*).

(*n*) While the northern winds, that is, the wind due north, and all the intermediate ones in every point of the compass from due east to due west, are cold and dry, and commonly of a tendency to bring snow ; the southern, or the winds which blow from any point of the compass to-

326. To return, from this digression on agriculture, to our proper subject : From what has been said upon the cultivation and nature of plants, we learn, that their life is similar to that of animals ; that every thing vital in nature is governed by excitement, which the exciting powers only afford ; that there is in no living system, whether of the animal or vegetable kind, any inherent power necessary to the preservation of life ; that the same powers which form life at first, and afterwards support it, have at last a tendency to produce its dissolution ; that life, the prolongation of life, its decay and death, are all states equally natural ; that every living system lives in that which it procreates ; that the generations of animals and vegetables are in that way renewed, that the system of nature remains, and maintains an eternal vigour ; in one word, that all the phenomena of nature are fabricated by one single organ (*o*).

wards the south, from the same points of due east to due west, are as commonly warm and moist, and often productive of mild fertilising rains.

(*o*) No discovery, of any importance or extent over nature, has yet been made, which does not warrant, as far as the smallness of the number of such discoveries go, the truth of this assertion. See the Introduction to my Observations.

THERE are many circumstances which give reason to believe, that this globe has undergone great changes, and that whatever is now sea, has been land; whatever is land at present, has been sea; and that the fossil kingdom of nature has not been more retentive of the respective form of each of its individuals. But whether the last, like animals and plants, have a sort of life, so as, after their manner, to be produced into living existence, to grow, to run through a period equally without growth and diminution of bulk, to decay, to die, and, in death, lose their proper form; the great duration of their age, and the shortness of ours, deprive us of any possibility of learning.

327. As all the motions of the planets, which latter were formed to remain and continue their courses for ever, depend upon this one principle, to proceed straight onward, according to the manner in which all projectiles move, and then by the influence of gravity, which affects them all, to be pulled downward, and thereby, upon the whole, thrown all into circular motions; so, in the lesser and living bodies, with which those greater bodies are filled, that is, animals and plants, of which the whole species remain, though the individuals of each species die; whatever is the cause of thier

functions, whatever gives commencement and perfection to these, the same weakens, and, at last, extinguishes them. It is not therefore true, that some powers are contrived by nature for the preservation of life and health, others to bring on diseases and death. The tendency of them all is indeed to support life, but in a forced way, and then to bring on death, but by a spontaneous operation.

PART III.

OF GENERAL DISEASES.

THE FIRST FORM, OR STHENIC DISEASES.

CHAP. XV.

328. IN every sthenia, in all sthenic diseases, in the whole first form of diseases (*a*), an universal criterion is, increased excitement over the whole system, manifested, during the predisposition, by an increase of the functions of body and mind (*b*), and demonstrable, after the arrival of disease, by an increase of some of the functions, a disturbance of others, and a diminution of others; in such sort,

(*a*) See above, par. 69. 88. 148. 151. 251. Chap. IX.

(*b*) See par. 151. throughout.

that the two latter are easily perceived to arise from the hurtful powers which produce the former, and to depend upon their cause. As, by that common bond of union, the diseases of this form are connected together ; so,

329. THERE are certain circumstances, by which they are distinguished by a difference of their degree : for there are some sthenic diseases, accompanied with pyrexia (*c*), and the inflammation of some external part ; there are others without the latter of these, and others without both.

330. THE general sthenic diseases, with pyrexia and inflammation, are some of them called phlegmasiæ, others exanthemata. But they will all, without distinction, be treated here according to their rank in excitement, from the highest to the lowest degree of excitement.

331. THE phlegmasiæ and exanthematic diseases have the following symptoms in common to them. The first of these is that degree of sthenic diathesis

(*c*) See par. 68. and the subjoined Note, for the meaning of pyrexia, which will be just now repeated.

which distinguishes predisposition (*d*). This diathesis, upon the formation of the disease, is succeeded by shivering, a sense of cold, languor, and a certain feeling, like that which we have in fatigue from labour, called, by physicians, lassitude. The pulse at first, in every case, and in mild ones through their whole course, is moderately frequent, and, at the same time, strong and hard. The skin is dry, and there is a retention of other excretions (*e*). The urine is red; there is great heat, and often thirst.

332. THE symptoms peculiar to the phlegmasiæ (*f*), are an inflammation of an external part, or

(*d*) From the first deviation from perfect health to the commencement of actual sthenic disease, the sthenic diathesis takes place in an increasing scale from 40 degrees to 55 degrees.

(*e*) Such as that by the belly, and that which pours out the saliva and mucus, and forms the matter of expectoration.

(*f*) The phlegmasiæ are sthenic diseases, accompanied with inflammation in an external part, as has been said somewhere below, according to the definition of nosologists. But, as there is no difference betwixt them and synocha or the catarrh, which latter are unaccompanied with inflammation, we therefore pay no regard to the distinction; and shall regard nothing, either in these or any other

an affection nearly allied to it; while the general affection, for the most part, precedes this local one, and never succeeds to it (*g*). This general affection, for the greater convenience of distinguishing

diseases, but what is constituted by a real difference of excitement. It is the excitement by which we are to be guided through our whole distribution of diseases.

(*g*) Long before any part of this doctrine was discovered, when I was in search of certain facts respecting peripneumony and pleuritis, I discovered one for which I was not looking, of more importance than all the rest put together. It had been asserted, by most systematics and all the nosologists, that the primary symptom in the phlegmasiæ was the inflammation of a part: I saw that was not true with respect to rheumatism, in which the general affection or pyrexia often rages one, two, or three days before the sign of inflammation, pain, is perceived in any of the joints. I could also discern, that from the moment the pain and inflammation appeared in erysipelas, or the rose, there was also the general affection equally conspicuous. In short, in no one of that set of diseases, did the fact appear that the inflammation was primary, and the pyrexia, or affection of the whole system dependent upon it. But as peripneumony was said in Edinburgh to be an exception, the detection I made equally disapproved that. In all the works of Morgagni, where peripneumony and erysipelas are treated, and in all those of Trillerus, a professed writer on that subject, and in a thesis in Sandiforth's Thesaurus, taken from no less than 400 cases of that disease (for they are now by others, as well as by me, considered as one), I found, that in somewhat more than

it from fevers, is to be denominated pyrexia (*b*). In the exanthematic sthenic diseases, an eruption of spots or pustules, more or less crowded, according to the degree of the diathesis, covers and diversifies the skin. The eruption appears upon the occasion of a foreign, contagious, matter having been taken into the body, and detained below the cuticle.

333. THE explanation of all those symptoms easily flows from the doctrine delivered above. The sthenic diathesis, in the manner which has been so fully explained (*i*), precedes. The characteristics of the pulse are never to be referred to the affection

one-half of the given number, which was very respectable, the general affection appeared from one to three days before the pain came on, and in all the rest of the cases, though for any thing these authors said to the contrary, they might sometimes have come on together, yet, that there was not one, in which it could be fairly alleged, that the pain was the first and primary appearance. Hence I found, that all the theories raised upon that hypothesis, of course, fell to the ground. Indeed, the fact is quite consistent with every one here.

(*b*) Of this designation, warning has been given more than once. See Note at 329.

(*i*) See above, all the paragraphs, where the operation of the powers, producing sthenic diathesis, is accounted for.

of a part, having been demonstrated to arise from the diathesis (*k*).

334. THE frequency of the pulse in sthenic diseases is moderate, because, while the stimulus in the system cannot fail to produce some frequency, the quantity of blood, to be thrown into quick motion, sets bounds to it, and prevents its rising to quickness. But, at the same time, it is evident, that a quantity so great cannot be transmitted with the same celerity, as an under-proportion (*l*). The strength of the pulse is occasioned by the degree of excitement in the moving fibres of the vessels, which is commonly called their tone, and by that of their

(*k*) See also par. 155. and 156. and particularly 174.

(*l*) In fevers and other asthenic diseases of great debility, from the weakness of the stomach and other digestive organs, and the small quantity of nutritious matter taken in, the quantity of blood which is diminished in every one of those diseases, cannot be more than one-third less than that which overfills the vessels in sthenic diseases. Consequently, by a given power, it may be propelled in the same proportion, that is, one-third faster than in the sthenic diseases, which also appears in fact; for while 100 beats in a minute is a frequent pulse in sthenic diseases, till their approach or actual conversion to indirect debility, the common frequency in fevers, and the other high asthenic diseases, is 150 beats in the same time.

density considered as simple solids (*m*). The hardness of the sthenic pulse is nothing else, than the continuance, for some time, of each strong contraction closely embracing a great column of blood, and thereby, as it were, resembling a stretched rope (*n*):

335. THAT this is the exact state of the arteries,

(*m*) See above, 59. 60. and 61.

(*n*) See par. 155. If it should be alleged, that though, in fevers, and the other cases mentioned just now in the Note (*a*), the deficient quantity of blood, to be put in motion, will account for the greater celerity of motion, than in the diseases which make the present subject; still the great weakness of the heart, for the want of the stimulus of a due quantity of blood, as well as of many others, should overbalance the effect arising from the small quantity to be moved. But the answer to that objection is easy. It arises from the explanation of the strength and hardness of the pulse just now mentioned in the text: The febrile pulse is, indeed, one third quicker than the sthenic pyrexial; but it is weak, and small, and soft, while the other is strong, and full, and hard. An equal force, then, of the heart, to that in the sthenic case, is not required to account for the difference of the effect. A third less of blood, with an equal force behind, will be driven, not only one third faster, but with strength and hardness. The want of these two last, then, is to be set to the account of the greater weakness of the heart. Though the blood, then be driven one third quicker, yet the impulse communicated, upon the whole, is one third less, as the characteristics of both kinds of pulse readily explain to us.

is proved by the great quantity of food taken with a good appetite, before the arrival of the disease, and during the period of predisposition ; it is proved by the same, and other powers, giving an unusually great excitement over the whole system (*o*), and, therefore, among their other effects, increasing the digestive energy ; and it is proved by evacuant, with other debilitating remedies, both preventing and removing the diseases. The confounding, therefore, of this state with one diametrically opposite (*p*), which has hitherto been an universal practice, was a very capital blunder, and could not fail to produce the worst consequences, by equally perverting the theories and actual practice of the art.

336. THE shivering, and sense of cold, depend for their cause upon the dryness of the skin. The languor, and feeling of lassitude, point out a higher degree of excitement in the brain and fibres of the

(*o*) See the whole of the first Chapter of Part II. upon the powers producing sthenic diathesis.

(*p*) Which authors, and too many practitioners, have universally done, in jumbling proper fevers with the present diseases, under the vague and false denomination of febrile or feverish diseases. In nosology, the synochus is conjoined with typhus, the gangrenous sore-throat, which is a typhus fever, with the common sthenic inflammatory pyrexia.

muscles, than can be conveniently borne by the excitability, confined within certain boundaries (*q*). They are, therefore, functions impaired from a stimulant, not from a debilitating cause (*r*).

337. THE dryness of the skin is occasioned by the great excitement and density of the fibres which encircle the extreme vessels, diminishing their diameters to such a degree, that the imperceptible vapour of perspiration cannot be taken into them, or, if taken in, cannot be transmitted (*s*). This state is not spasm, is not constriction from cold, but a sthenic diathesis, somewhat greater on the surface, than in any other part. The stimulant energy of heat (especially after the application of cold), which is otherwise a powerful exciting cause of sthenic diseases, is applied to this part with more force than to any of the interior parts, and increases the sum total of stimulant operation (*t*).

338. THE same, in general, is the cause of the temporary retention of the other excretions (*u*);

(*q*) See above, 154.

(*r*) See above, par. 166.

(*s*) See 69. and 113.

(*t*) See 37. *θ*. and 113. just now quoted.

(*u*) See 331. and Note (*d*); and also the par. 159. 160.

only that the operation of heat, just now mentioned (x), is foreign from the present explanation; and, on that account, the diathesis, which affects the interior vessels, is more gentle. These vessels, for that reason, and because they are naturally of a larger diameter, are sooner relaxed in these diseases, than the pores upon the skin (y).

339. THE redness of the urine is owing to the general diathesis affecting the vessels which secrete it, and proving an obstacle to the secretion (z). Hence arises the straining of the fluid to be secreted to distend the small vessels (a), and the counterstraining of the moving fibres, by their contractions, to diminish the cavities which the distention increases; and, in so far as they perform the function of simple fibres, to resist the distention. But as, in this forcible action of the vessels, the cohe-

(x) in the 337th; and the reason is, that heat being stationary in the interior parts, has not that force which it has upon the external surface. See above, par. 113.

(y) It is reasonable to think, that vessels, which pour out a watery fluid, have a larger diameter than those, which, like the perspiratory, even in their healthy state, only transmit an imperceptible vapour.

(z) See par. 163.

(a) Or tubuli uriniferi.

sive force of all the simple solids yields somewhat, the effect comes to be the transmission of some particles of blood. This transmission happens not at first; because the distention does not suddenly, but after some time, overpower the cohesion of the mass of simple solids.

340. THE cause of the great heat is the interruption of the perspiration, preventing the heat, generated in the inner parts of the system, to pass off by the skin (*b*).

341. THE thirst is occasioned by the sthenic diathesis closing up the excretory vessels of the throat, and there opposing the excretion of the peculiar fluid (*c*). And the heat, by dissipating what fluid is excreted, contributes to the effect.

342. THE inflammation, and affection nearly allied to it (*d*), whether of a catarrhal or of any other nature, is a part of the sthenic diathesis, greater in the affected, than any other equal part of the system (*e*). Which is manifested by the exciting pow-

(*b*) The rest is erased.

(*c*) See par. 159.

(*d*) mentioned above in par. 332.

(*e*) 168. 169. 170. 171.

ers also, in this case, acting upon the whole system, by the symptoms of the diseases showing an affection in common to the whole, and by the remedies driving that affection, not from the inflamed part only, but from the whole system (*f*).

343. THE general affection, for the most part, precedes that confined to one part, or is synchronous with it, never comes after it; because its cause, the excessive excitement (*g*), producing the diathesis, exists before the disease itself (*h*); and, though it forms the rudiments of the affection of the part during the predisposition (*i*), yet it does not, at that time, form that affection itself, and not always even during the disease, but only in a certain high degree, both of the disease and of the particular affection itself (*k*). Hence, when the diathesis is great, the affection of the part is in proportion (*l*), and slight under a lesser degree of the diathesis

(*f*) 89. See also Part I. Chap. IV.

(*g*) See 62. 69.

(*h*) See 174.

(*i*) See above, 169.

(*k*) See above, 168. *n*.

(*l*) as in peripneumony and rheumatism, inflammatory sore throat, and mild erysipelas, sore throat.

(*m*); while, in a moderate and gentle diathesis, it does not happen at all (*n*); and for this reason, that a high degree of diathesis is necessary to the formation of it. Thus, in peripneumony, where the diathesis is the greatest, and in rheumatism, where it is next in greatness, the inflammation is found proportionably great (*o*). And, even in the measles, the danger of which turns intirely upon the degree of sthenic diathesis, the danger of inflammation is equal, by which, and often in a high degree, the lungs themselves are affected. Synocha is never phrenitic but when a great diathesis occurs, threatening the brain with inflammation, or the danger of it. Nor is there any danger to be apprehended in erysipelas (*p*), even when its inflamma-

(*m*) as in the sthenic.

(*n*) As in synocha, or the common inflammatory fever and catarrh.

(*o*) This proposition does not go so far as to assert, that there may not be a sthenic disease, without any actual inflammation, but with an affection of a part nearly allied to it, which depends upon an equally high diathesis as either peripneumony or rheumatism, and even higher than the latter. Such we find, as I have formerly said (157. and 158.), in phrenitis. But the meaning is, that the inflammation, when it does happen, is always in proportion to the degree of diathesis.

(*p*) or the rose, or St Antony's fire.

tion affects the face, but when the pyrexia is violent. And the mildness of the diathesis ensures a good termination. Simple synocha is nothing else but a phlegmasia, consisting of a pyrexia and diathesis, inadequate, upon account of their small degree, to the production of inflammation. Yet, as all the hurtful powers producing it, and all its remedies, are precisely the same with those of any phlegmasia; the separating it from them, and uniting it with fevers, which are diseases of extreme debility, was an unpardonable blunder (*q*); and so much the more so, that inflammation, which was falsely supposed essential to the nature of the phlegmasiæ, does take place in it, as often as the diathesis, necessary to produce it, is present (*r*). Yet this fact,

(*q*) This has been more than once hinted at, and once a little above. The nosologists have excluded synocha from their order of phlegmasiæ, because, forsooth, though it was in every other respect the same, it wanted the inflammation of a part; and they united it with proper fevers, though, in the powers producing it, in its proper cause, and in the remedies which remove it, it was, in every respect, diametrically opposite to those diseases. But their rule of judging was different from ours.

(*r*) What is a peripneumony, a rheumatism, or any phlegmasia, but a synocha, with a diathesis sufficient to produce inflammation?

upon account of another blunder, neither of a slighter nature, nor of less hurtful consequence, that of supposing inflammation the cause of the phlegmasiæ, could not be discerned. In fine, to remove all doubt of inflammation being compatible with the nature of catarrh, but commonly not taking place in it, upon account of the moderate general diathesis, upon which it usually depends; even in it, as often as the diathesis rises high, which sometimes happens, when the proper plan of cure for it has been neglected, and the effect of the exciting hurtful powers has been carried to excess, an inflammation, and a formidable one indeed, arises, often affecting the throat (r), and sometimes the lungs, and producing there an affection rising to all the rage of a peripneumony.

344. It is in vain to talk of a thorn thrust under the nail, wounding it, super-inducing inflammation upon the wound, and spreading a similar affection along the arm to the shoulder, and a pyrexia over the whole body, as an illustration and proof of the manner in which the phlegmasiæ arise from in-

(r) When that happens, it is still commonly a mild disease; as will be shewn by and by.

flammation. For nothing like a phlegmasia follows this, or any similar affection of a part, unless the sthenic diathesis previously happens to have taken place, and is now upon the eve of spontaneously breaking out into some one or other of its respective diseases. But, without that diathesis, no general affection takes place; and if an opposite diathesis be present when such an accident happens, an opposite general affection will be the consequence, to wit, a typhus fever, arising as a symptom of gangrene (*t*), and dangerous to life.

345. THAT the affection of the part depends upon the general affection, is proved by the frequent occurrence of inflammation, without being followed by any phlegmasia. Which happens, as in the case just now mentioned, as often as the general diathesis is absent, or the inflamed part is not

(*t*) It is with much regret, that I should have had occasion to observe the bad, and too often fatal, consequence of treating such local affections, without discrimination of the habit with which they may coincide. The disease is treated by evacuation and starving, even in habits the most weakened, and drink is withheld from persons, even the most accustomed to it. The disease increases, and, as if that were for want of more such treatment, the same treatment is persevered in, till death closes the scene.

an internal one, and of high sensibility (*u*). Accordingly, all the examples of phlegmone, all those of erythema, or erysipelas, without general diathesis (*x*), are foreign from the phlegmasiæ, absurdly conjoined with them, and, more absurdly still, con-

(*u*) See above, 171.

(*x*) See also par. 81. The nosologists, under their genus of phlegmone, which, in one of them, is divided into two species, proper phlegmone, and erythema, have ranked together a number of local, and most of them insignificant affections, which they have considered as laying the foundation of their phlegmasiæ, or general sthenic diseases, with an inflammation in a part. But will any man, in his senses, see any connexion betwixt chill-blanes, which is one of them, or anthrax, which is a local symptom of the plague, or the slight inflammation upon the eye, called a stie, or the inflammation in the groins of children, from their being scalded by their urine, or the bites of insects, the effects of which are confined to the bitten part; will he see any connexion betwixt these and a peripneumony, which arises from hurtful powers affecting the whole system, and no part in particular; and is cured by remedies which affect the whole system, and the inflamed part not more, nor even so much as many others? All these, however, have been made the prototypes of inflammation, by which they meant their phlegmasiæ; as if there were nothing to be regarded in them but the inflammation, which, in fact, is their most insignificant part, bearing no higher proportion to the sum of morbid state over the system, than that of 6 to 3000, or even less. See above, Part I. Chap. IV. and particularly par.-50.

sidered as their prototypes ; being, in fact, all only local affections, or symptoms of other diseases. This conclusion is not weakened by a certain resemblance of diseases with inflammation in an internal part to the phlegmasiæ ; these diseases being neither preceded by the usual hurtful powers which produce either the phlegmasiæ, or any general disease whatever, nor cured by the usual remedies of the latter. It was, therefore, a very bad mistake, and of most hurtful consequence to the practice of cure, to enumerate, among the phlegmasiæ, those diseases which arise from stimulants, acrids, and compression, and are only curable by removing their local cause, which is seldom effected by art (*y*).

(*y*) See above, par. 81. Take, for an example, gastritis, which the nosologists have made one of their phlegmasiæ, and put upon the same footing with peripneumony, and the other diseases which may be admitted as phlegmasiæ. That affection is an inflammation in a portion of the stomach, in consequence of a solution of continuity from the previous swallowing of ground glass, small fish bones, a quantity of Cayenne pepper ; or symptomatic of a scirrhus obstruction and tumor. These, not the ordinary hurtful ones which operate upon the whole system, as in the true phlegmasiæ, are the powers which induce that affection. It has no connexion with the excitement, the affection of which is only an effect of the locally stimulating power, and of the sensibility of the stomach ; its true

346. IT is not without good reason, that the appellation of pyrexia has been given to the general affection, which appears in the phlegmasiæ and exanthemata; they being, by it, most advantageously distinguished, on the one hand, from fevers, which are diseases of debility in extreme, and, on the other, from a similar, but altogether different, affection, which is a symptom of local diseases (*z*), and may be called a symptomatic pyrexia.

347. THE true sthenic diseases (*a*), accompanied, except one, with pyrexia (*b*) and external inflam-

cause being the solution of continuity or obstruction, keeping up the inflammation; and its remedies such, as are adapted to the removal of that local state. It may happen to a sound habit, where there is no diathesis in any degree; in which case, it is purely local: or it may accidentally coincide with either diathesis; in which case, it is a combination. When the combination is with sthenic diathesis, debilitating evacuant remedies can only palliate; but they bring life into danger when the asthenic diathesis is present, which is 17 times out of 20 for the other.

(*z*) The general affection, arising in the system from the effect of a thorn pushed under the nail (see par. 344. and Note), and that occurring in the gastritis, mentioned in the last paragraph of the text (see the Note on that paragraph), are good examples of cases, to which the term symptomatic pyrexia should be applied.

(*a*) See above, 329.

(*b*) See par. 332.

mation (*c*), are peripneumony, phrenitis, the small-pox, the measles, as often as these two last are violent, the severe erysipelas, rheumatism, the mild erysipelas, and the cynanche tonsillaris. Those free from inflammation are, catarrh, simple synocha, the scarlet fever, the small-pox, the measles ; when in the two latter cases, the eruption consists only in a few pustules.

The Description of Peripneumony.

348. THE symptoms peculiar to peripneumony (*d*) (under which pleurisy, and, as far as it is a general disease, carditis, are comprehended) are, pain somewhere in the region of the chest, often changing its seat ; difficult breathing ; cough, for the most part bringing up an expectoration, and sometimes a mixture of blood in the matter of expectoration.

(*c*) See 168.

(*d*) The symptoms, in common to it and the other diseases of the same form, enumerated in the last paragraph, have been described in par. 331. These peculiarly distinguishing the phlegmasiæ and exanthemata, that is, the diseases either accompanied with inflammation, or an approach to it, are described in par. 332.

349. THE seat of the disease is the whole body, the whole nervous system (*e*); which is proved by the disease being produced by an increase of the diathesis, which took place in the predisposition, and by no new circumstance (*f*); by the inflammation, within the chest, for the most part following the pyrexia at a considerable interval of time, and never preceding it (*g*), and by bleeding, and other remedies of similar operation, which affect not the inflamed part, more than any other equally distant from the centre of activity, removing the disease. The proper seat of the inflammation, which is only a part of the general diathesis, is the substance of the lungs, and a production of the pleura, covering their surface; or any part of that membrane, whether the part lining the ribs, or that containing, within the external surface of it, the thoracic viscera, different in different cases, and in the same case at different times.

350. PAIN, in some part of the chest, depends upon an inflammation of the corresponding internal

(*e*) See par. 47. 48. 49. 54. 55. and not the inflamed portion in the lungs, according to the common opinion.

(*f*) See above, 75. 76.

(*g*) See above, 332. and the Note (*b*).

parts just now mentioned (*b*), which is proved by dissection; only that it is oftener occasioned by an adhesion of the lungs to the pleura costalis, seldom to an inflammation of that membrane, as we learn from the same evidence.

351. WHEN the inflammation takes place on the surface of the lungs, it is impossible it can be confined, either to the substance of the lungs, or the membrane covering their surface. For how can any person suppose, that the points of the same vessels, either as distributed upon the membrane, or as plunging into the substance of the lungs, or emerging from it, can alone be inflamed without a communication of the affection to the next points (*i*)? The distinction, therefore, of the inflamma-

(*b*) See above, par. 174.

(*i*) Yet one nosologist, upon that very supposition, makes two orders of phlegmasiæ; one seated on the membrane, the other in the interior surface of each viscus. Into this error he had been led, by observing, that, after death, the interior substance of the liver exhibited signs of previous inflammation. And, as other dissections showed the membrane, upon other occasions, to have been in a state of inflammation, he thence drew his rash conclusion. But it is to be observed, that the first mentioned state of the liver was not a phlegmasia at all, as it had not, during life, exhibited any of the symptoms of that disease,

tion accompanying the phlegmasiæ into perenchymatose, or that affecting the substance of the viscus, and into membranous; as well as the notion which makes the latter case universal, is equally remote from the truth. The reason of neither the membrane contiguous to the lungs, nor the substance of the latter, being always inflamed, but of the inflammation being sometimes communicated to some part of the neighbouring membrane, is explained by the vicinity of the part inflamed, in the last case, to that which receives the air, and, therefore, varies in its temperature (*k*).

or even given any sign of the presence of inflammation. It is a case, then, with which we have nothing to do upon this subject, even so far as it applies to the liver. But the extending the application to all the viscera, which he was pleased to make the seats of some phlegmasia or other, was looseness of reasoning, and carelessness of matter of fact, in extreme. — A gentleman, whose works have lately been buried, without any struggle or signs of life, but that of a feeble unintelligible sound from within the tomb, which no living reason could make any sense of in their life time, took it into his head to maintain (for the sake of seeming to differ with men of name and reputation, his highest ambition), that the inflammation in the phlegmasiæ was always seated in the membrane. The answer to which is, given in the text.

(*k*) So far is it from being true, that this sort of inflam-

352. THE pain often shifts its seat (*l*) in the course of the disease; because its immediate cause, the inflammation, is equally liable to change, being disposed to leave its first seat, or in part to remain in it, while in its greatest part it rushes into another. Which is a fact, proved by the comparison of the known change of the pain, with the traces of inflammation in the corresponding parts, discovered after death (*m*).

353. THIS fact, added to those already produced, brings another solid argument (*n*) in refutation of the opinion, that the disease is produced, or kept up, by inflammation, or in any shape depends upon it; confirms that here advanced, and proves, that the inflammation is regulated by a

mation can be confined to a few points of the affected vessels (see the Note here at (*i*), that, in fact, we find it, though not so often as has been supposed, sometimes in the mediastinum, sometimes in the external membrane of the pericardium, sometimes in the superior membrane of the diaphragm. Boerhaave's notion of the translation of inflammation from one viscus to another, was an error in the opposite extreme.

(*l*) See above, 348.

(*m*) Many such are to be found in Morgagni, Bonnetus, and Lieutaud.

(*n*) See all that has been said.

strong general diathesis, and directed by it, sometimes to one part, sometimes to another ; that, as depending on that cause, it increases, and is, in a manner, multiplied. And the same conclusion is confirmed by the inflammation abating, becoming more simple, and, at last, receding from every part it had occupied, in proportion to the progress of the cure in relieving or removing the diathesis. The same fact is confirmed by the nature of rheumatism, the pains of which are more severe, and greater in number, in proportion as the diathesis runs higher ; and milder, and fewer, in proportion to its gentleness. These pains, which have their dependence upon the general diathesis, and are a part of the general disease, ought to be distinguished from local ones, which often occur, and may accidentally precede this disease (*o*).

354. THE difficult breathing is owing to no fault in the lungs, as an organ, to no defect of excite-

(*o*) Stitches, as they are called, frequently happen from slight accidents, and may appear before the arrival of rheumatism ; but they should be distinguished from the pains which arise from the diathesis, constituting that disease ; a distinction which has seldom been attended to, for want of a right principle to lead to such attention.

ment in them, but to the air alone in inspiration, by filling and distending its own and compressing the inflamed vessels.

355. THE cause of the cough is a large secretion and excretion of the exhalable fluid, and mucus, irritating the air vessels, increasing their excitement, as well as that of all the powers which enlarge the cavity of the thorax ; then suddenly suspending it, and thus performing a full inspiration, and a full expiration, partly in conjunction with the operation of the will (*p*).

356. THE cough is less, or none at all at first ; because, on account of a strong diathesis occupying the extremities of the vessels, the same fluids flow on in the form of an insensible vapour, are less irritating in that form, and dismissed with less effort.

357. AGAIN, the cough is afterwards followed by expectoration ; because the accumulated fluids, with their effect, the effort of coughing, are carried forward in the rapid action of the air rushing out,

(*p*) See above, 160. and 161.

as it were, in a torrent (*q*). And the mixture of blood with them points out the force of secretion formerly explained.

358. THE softness of the pulse, commonly taken into the definition of the disease (*r*), has been here rejected ; because the characteristics of the pulse do not follow the inflammation, but the general diathesis (*s*). With respect to the diathesis, the proper language is, that the pulse, instead of soft, is less hard ; and when the effect, that the cure has produced upon the pulse, is considered, it may then be said to be soft (*t*).

359. NOR is the varying feeling of pain, which is described as sometimes acute and pungent, sometimes obtuse, gravitative, and rather to be considered as an uneasiness than pain, though immediately dependent upon the inflammation, to be considered

(*q*) See above, par. 239.

(*r*) at least, when they called it peripneumony,

(*s*) See above, 155, 174.

(*t*) It is an universal effect of sthenic diathesis, to render the pulse hard in one degree or another. And peripneumony is not an exception from that fact. But the distinction arose from the mistake of inflammation being the whole, instead of an unimportant part, of the disease.

as of any consequence in pointing out the state or seat of the inflammation : because, however great the inflammation is, wherever it is seated, whatever danger it denounces, the only means of removing it, and of averting the danger, is to remove the general diathesis. The notion, therefore, of the membrane being inflamed, when the pain is acute, and the interior substance, when it is obtuse, must be rejected as good for nothing, must be guarded against as destructive (*u*). For often, when the disease has arrived at an advanced stage, a sudden abatement of the pain taking place, without a proportional relief of the breathing, to an unskilful person, gives an appearance of a return of health. But the cause of that, while it has nothing to do with the seat or sort of inflammation, is that degree of excitement, which shows that the excitability is exhausted, the excitement come to an end, and that the vigour, before excessive, is now converted into direct, or indirect, debility (*x*). Hence arises in the

(*u*) See par. 351. and the Note under it at (*i*).

(*x*) The direct debility may be owing to the proper cure, which is directly debilitating, having been carried too far, or to the indirect debility arising in the course of the disease, seldom now to alexipharmac treatment. See above, par. 47. and the subjoined Notes.

vessels, especially the labouring vessels, in place of the excessive excitement, with which they were before affected, no excitement at all; and extreme laxity takes place of their former density. Hence, instead of an excretion increased by violence, an immense discharge takes place without force, without effort, and merely by the watery part of the fluid, from the inert state of the vessels, leaving the more consistent; and a sudden suffocation takes place, in consequence of an effusion of fluids from all quarters into the air vessels.

360. THE carditis, or inflammation of the heart, is a disease of rare occurrence, is ill understood, and, for the most part, a local affection. When the latter is the case, there is no use for the interference of a physician. And, if ever it be a general disease, it admits of no other definition, or cure, but those of peripneumony. From peripneumony, then, as it arises from the same antecedent hurtful powers, and is removed by the same remedies, it is not to be separated.

The Description of Phrenitis.

361. PHRENITIS is one of the phlegmasiæ (y), with a slight inflammatory or catarrhal affection of some one, or more joints, or of the fauces, with head-ach, redness of the face and eyes, impatience of light and sound, watchfulness, and delirium.

362. INFLAMMATION, in its proper form, appears not in this case. And yet there is an approach to inflammatory state in the joints, in the muscles, and especially over the spine, or about the chest, or in the bottom of the throat ; or there is a catarrhal state, which is an affection depending, however, upon the same cause as inflammation, and only differing from it in being less.

363. THE head-ach, and redness of the face and eyes, arise from an excessive quantity of blood in the vessels of the brain and its membranes, distending, stimulating in excess, exciting in excess, and contracting the vessels, to a degree which gives pain (z). To the production of which last, inflamma-

(y) See above, par. 347.

(z) See above, 157. and 158.

tion is not necessary : independent of which, this excessive action is painful, because it exceeds that mediocrity in which agreeable sensation takes place (*a*). The redness both points out and explains the over-proportion of blood. And that the over-proportion gives pain by its distending operation, is shewn by the relief which bleeding, and every thing which diminishes the quantity, and moderates the impetus of the blood, administers.

364. It is the over-abundance, also, which produces the impatience of light and sound. For, as a certain impulse of the blood is necessary to the exercise of every sense, by whetting the organ of sensation (*b*) ; so, when the cause rises to excess, an equal increase of the effect must be the consequence. But these very symptoms, with pain, arise in an opposite state of excitement, to wit, the asthenic.

365. THE vigilance and delirium are occasioned

(*a*) See par. 182. 183.

(*b*) There is commonly, in the organ where any nicety of sense is to be exercised, an extraordinary apparatus of blood vessels. Blood flowing into these, increases, by its heat and the stimulus of its motion, the sense to which it is subservient.

by the same excess of excitement, produced by the excessive stimulus of the abundance of blood, and of the other powers. Other hurtful powers, contributing their effect, are, intense thinking, and a high commotion of passion. Excited by those, nobody, even in health, sleeps; and, therefore, the wonder is the less, that a high degree of them, and under the influence of a violent disease, should repel sleep. Both increased watching and delirium are symptoms of disturbance.

An Explanation of the Sthenic Exanthemata.

366. THE sthenic exanthemata, after the application of a contagious matter, and of the usual hurtful powers which produce sthenic diathesis, appear first in the form of a sthenic pyrexia, or synocha, and then, after a space of time, not certain to a nicety, are followed with small or larger spots.

367. THAT the exanthematic sthenic diseases differ not from other sthenic diseases not exanthematic, in any circumstance of consequence, is proved by this strong argument; that, except the eruption and the phenomena peculiar to it, there is nothing in the symptoms, and, except the contagion,

there is nothing in the hurtful exciting powers but what happens in any sthenic disease ; and the preventatives, as well as the remedies, are the same in all. While that is the state of the fact, it was the height of absurdity, merely for the sake of the eruption, and its peculiar phenomena, to separate the exanthematic from their kindred diseases, and to unite them with the most opposite diseases, both to them and to one another (*c*). For how, when the

(*c*) The nosologists have separated the exanthematic diseases, real or imaginary, into a class or order by themselves, which they have filled up with diseases, of which there is not two, but the small-pox and measles, which have any other connection, than their mere eruptive appearance, while they are separated from others, with which, in every respect, they have the most essential connection. Thus, the small-pox and measles are taken from the natural place, to which they are here restored. And it is unaccountable, that we should have it to say, that even erysipelas, which has surely no right, even to the trifling distinction of eruptive, has also been placed among them. Again, the plague, which is, to all intents and purposes, a typhus fever, its eruptive part not always disjoining it from that, is separated from it, though it is so nearly the same, scarcely excepting degree, and conjoined with sthenic diseases of a diametrically opposite nature. And the gangrenous sore-throat, which is also a typhus, has neither been placed among fevers, in its proper place, nor among the exanthemata ; to which the efflorescence, which it produces on the external surface, according to their own rules of ar-

usual plan of cure removes the effect of the eruption, whatever that be, and thereby shows it to be the same, can any one imagine that the cause should be different, and not precisely the same? Unless we must again have to do with those, who maintain, that the same effect may flow from different causes. Truly, the operation of contagion, in so far as it affects general disease, is not of an opposite nature to the general sthenic operation, but precisely the same.

368. CONTAGION is a certain matter, impercep-

agement, seemed better to entitle it than some others, especially the crysipelas. And it again (for there is no end of the confusion of this pretended order of some physicians) is conjoined, not only as a genus with sthenic diseases, but even as a species of one of those genera. The truth is, that systematics, who were otherwise no nosologists, have made too much work about eruptive and contagious diseases, and have never dived into the interior nature either of them or almost of any other. They have all followed each other from their first leader, and never once deigned to turn a glance of their eye upon the phenomena of nature as these arose before them. Hippocrates misled his followers; they misled theirs from age to age; and they all misled the poor nosologists, who have laid on the cope-stone of the absurdity of the art: and, having finished the fabric of folly, left mankind, if they are not pleased with it, to look out at their leisure for a better and more solid.

tible, of an unknown nature, and, like most of the phenomena of nature, only in any measure open to our inquiry in its evident effects. Taken from the body of one affected with it, or from any gross matter (such as clothes or furniture, where it happens to have been lurking), and received into a sound body, it ferments without any change of the solids or fluids; it fills all the vessels, and then is gradually ejected by the pores.

369. AND, as no effect, except sthenic diathesis, follows it, and the hurtful powers, which otherwise usually produce that diathesis, always precede it, and an asthenic or debilitating plan of cure always, and only, succeeds in removing it, and consequently its effect no ways differs from the diseases hitherto mentioned; it is, therefore, with justice, that the diseases arising from it, are conjoined with those others, as belonging to the same form.

370. BETWIXT them there is only this difference, that in the exanthematic cases of sthenic disease, the matter requires some time to pass out of the body, which time is different in different cases; and it passes out more copiously or scantily, the more free or impeded the perspiration is (*d*). But

(*d*) See above, par. 21. and 76.

it is impeded by no spasm, by no constriction from cold, and only by the prevalence of sthenic diathesis upon the surface of the body ; as is evident from this fact, that cold, by its debilitating operation, procuring a free issue for the matter, clearly promotes the perspiration (*e*). And that it produces this effect, by diminishing the diathesis, not by removing a spasm, has been demonstrated formerly. As the issue of the matter is in this way promoted by inducing a free perspiration ; so,

371. WHATEVER part of it is detained below the cuticle, by that delay, it acquires a certain acrimony, produces little inflammations, and conducts them, when produced, to suppuration. These, by irritating the affected part, create a symptomatic pyrexia and symptomatic sthenic diathesis, which should be distinguished from the general pyrexia and general sthenic diathesis (*f*).

372. THE period of eruption is more or less certain, because the operation of fermentation, being in some measure certain and uniform, to that extent requires a certain uniform space of time, for

(*e*) See par. 117. 18. 20. 121.

(*f*) See above, par. 175. and 346.

being finished, diffused over the system, and reaching the surface of it, as is attested by the effect. Again, it is not exactly certain, because the perspiration, in the varying state of vigour, that must occur, must, at different times, and under different circumstances, be more vigorous or more languid.

373. THE pyrexia, symptomatic of the eruption, sometimes takes on the form of an actual fever: The reason of which is, that the high degree of stimulus, which the eruption throws upon the whole surface, produces ultimately excessive excitement, and therefore puts an end to it in the establishment of indirect debility (g).

The Description of the violent Small-pox.

374. THE violent small-pox is a sthenic exanthema, on the third or fourth day of which, sometimes later, small spots or points, inflamed, and by-and-by to be transformed into exact pustules, break out; containing a liquor, which, generally on the eighth day after the eruption, often later, is

(g) See par. 215. 216.

changed into pus, and dwindles away in the form of crusts. The eruption, the degree of which is always in proportion to that of the sthenic diathesis, in this case is the greatest that ever occurs.

375. ALL these phenomena are governed by the laws of fermentation, lately mentioned (*b*). The number of pustules, being proportioned to the degree of diathesis, shows, that, without the hurtful powers, which otherwise, and without any co-operation of contagious matter, produce that diathesis, the contagion has not much effect in producing the real morbid state, and that it chiefly regulates the exterior form of the disease (*i*).

376. BUT a violent small-pox is distinguished by the following symptoms: Before the eruption there is a very severe pyrexia; this is succeeded by an universal crust of pustules over the whole body. Antecedent to which, the hurtful powers are very violent sthenic ones, and particularly heat; the remedies which remove it are very asthenic, and in preference to any of them cold.

(*b*) See above, par. 368.

(*i*) Which, without diathesis, is of no consequence, and does not amount to general morbid state.

The Description of the violent Measles.

377. THE violent measles is a sthenic exanthematic disease (*k*), beginning with sneezing, watery eyes, dry cough, and hoarseness; on the fourth day of which, or later, there appears an eruption of small numerous papulæ, or little points, which on the third day, or later, terminate in an appearance of branny scales. This disease, when preceded by a high degree of sthenic diathesis, is proportionally violent.

378. THE sneezing, watery eyes, dry cough, and hoarseness, are catarrhal symptoms, and, therefore, depend upon sthenic diathesis (*l*). And, since they appear, four days or more, before the eruption, that is, before the matter might seem to have reached the affected parts, and are constant and universal; hence are we to suppose, that the sthenic diathesis follows the hurtful powers, which usually produce it, and not intirely the peculiar matter in this case, and that it is indispensably necessary to the measles. But though that supposition should

(*k*) See above, par. 366.

(*l*) See above, par. 175.

be rejected, and it should be contended, that those symptoms arise from the contagious matter ; it still must be granted, that this disease differs, however, in nothing from the other sthenic diseases, but equally depends upon sthenic diathesis, and yields to antisthenic or debilitating remedies. And it must be allowed, that, since the matter produces the same effect as the usual hurtful powers, its operation must be absolutely the same, and the cause of the disease the same. Consequently, we find nothing in the indication of cure, but what is in common to this disease with other sthenic exanthematic ones, which is, that time must be given to the matter to pass out of the body, and the perspiration be conducted in the same manner, as the sthenic diathesis is usually treated upon other occasions (*m*).

379. THE eruption admits of the same reasoning which has been delivered (*n*). The circumstance of its being a violent disease when preceded by a violent sthenic diathesis, and mild in a mild degree of that diathesis, is a further instance of the little difference that there is betwixt the operation of contagion, and that of the ordinary powers producing sthenic diathesis.

(*m*) See above, par. 96.

(*n*) See above, par. 375.

380. WHEN the diathesis runs so high as to suppress the perspiration, the eruption often disappears for a time, as if it went into the interior parts of the body : Which is a danger that is chiefly threatened at the end of the disease ; and shows, that this matter, in the same manner as the variolous, kindles up a symptomatic inflammation over the surface of the body, and then, by a further increase of the diathesis, suppresses the perspiration. Hence, with other viscera, the lungs (*o*) are often inflamed (*p*).

(*o*) What follows of this paragraph is erased.

(*p*) That the lungs should be inflamed in a violent state of the diathesis in the measles, is not to be wondered at ; as the common catarrh, when its diathesis runs high, is liable to produce the same effect. (See par. 343. towards the end). But, considering how many facts in medical writings I have found false, the effect of that on my mind, is to render the weight of testimony in favour of the various internal viscera being so liable to be inflamed, from this supposed striking in of the measly eruption, very light, and to dispose me to doubt of the fact altogether : Which I am the more inclined to do, from the analogy of a broad fact in direct contradiction to it, namely, that the inflammation, depending upon the general diathesis in sthenic diseases, never, as I have yet found, affects an interior part. (See par. 113. 168.) Neither is inflammation, from any other source, near so frequent in internal parts as vulgar opinion has taught us. Dissection has shown inflammation in the intestinal canal in dysentery, or what is call-

381. THE violent state of the small-pox, often from the great stimulus of the eruption, converts both the sthenic diathesis and eruption into the asthenic ones, and thereby produces the confluent small-pox, of which we are afterwards to treat.

ed in English the bloody flux. But that only happened under the evacuant, debilitating, vegetable, plan of cure ; and, even in that case, seems to have been an ultimate, not an early, effect, much less a cause. And it has been shown, that what has been considered as a burning inflammation in the first passages, is not an inflammation at all. (See above par. 198.) Nay, even when inflammation does happen internally, it is never of the sthenic, but always of the general, or local, asthenic kind, and, when quickly cured, cannot be inflammation. If there be any truth in the frequency of inflammation towards the end of the measles, it must be of the asthenic kind : Which is the more likely from its late appearance, and from a circumstance that, though no where noticed, has great weight with me ; which is, that, as the distinct small-pox passes into the confluent, peripneumony into dropsy of the chest, and any sthenic disease with its diathesis, into any asthenic disease, and the diathesis on which it depends ; there is nothing in the nature of the animal economy and of the powers acting on it, to prevent the same conversion of sthenic into asthenic state in the measles. And if, which is most probable from the alexipharmac practice, which was then used in this disease, indirect debility can induce such a change, no disease has a fuller chance for it than the measles. But I am sure, were the debilitating plan used from the beginning, no such consequence would happen.

Whether any thing like that is the consequence of the measles, is not yet ascertained. But, as every excess of excitement, as in the conversion of peripneumony into a dropsy of the chest, is liable to run into direct debility, it is, therefore, scarcely to be doubted, but that the same thing happens to this disease, which is inferior to none in violence.

The Description of the violent Erysipelas.

382. THE violent Erysipelas is a phlegmasia, always beginning with pyrexia, and followed by inflammation. The inflammation is seated in some external part of the body, oftenest in the face, sometimes in the throat, with redness, of an unequal edge, somewhat raised, creeping from one place to another, and attended with a sense of burning.

383. IT is peculiar to this inflammation, and foreign from the other general ones, to invade the corpus mucosum. To assign a reason for which is of no consequence: since this inflammation does not differ from the others either in the operation of the exciting powers producing it, or in that of the remedies which remove it.

384. THE cause of the redness of the inflammation, in this as well as in every case, is an excessive quantity of blood in the inflamed vessels ; for the question about the degree of redness is of no importance. There is less swelling in the inflamed part, than in other sthenic inflammations, because there is here a free space betwixt the scarf-skin and true skin, allowing the effused humour room to spread and diffuse itself. The same is the cause of the slow motion of the inflammation, and of the inequality of its edges. The sense of burning is owing to an acrimony of the contained fluid, acquired by stagnation.

385. THE attack of the inflammation upon the face is not more dangerous than upon any other place, except when the diathesis, upon which it depends, is great, rendering the inflammation proportionally great (*q*). In which latter case, whatever part is inflamed, the disease must be held for a severe one ; but still severer, if the inflammation seizes the face ; in which case a great tumult of affection internally accompanies the disease.

386. WHEN such a sthenic diathesis, and affec-

(*q*) See par. 85. 343.

tion of the head depending on it, happens, no disease is more dangerous, none more rapid in its career to death ; while, in a mild diathesis, no disease is milder.

A Description of Rheumatism.

387. RHEUMATISM is a phlegmasia, especially in that temperament, which inclines to the sanguine. It is a consequence of heat succeeding to cold, or so alternating with it as to prove the more stimulant. It is accompanied with pain nigh, or between, the joints, chiefly the greater ones, and proportioned to the degree of the diathesis (*r*) ; and the inflammation always comes after the pyrexia.

388. EXTERNAL temperature is hurtful in this disease, in the same way as it has been often already explained (*s*).

389. THE rage of the pain is in the parts which have been mentioned (*t*), because it is in these parts that the inflammation, or more increased part

(*r*) 343.

(*s*) 113. et passim.

(*t*) 168.

of the general diathesis (*u*), chiefly acts. Which again happens, for this reason, that the nearly most powerful of the exciting hurtful causes, the temperature, which has been mentioned (*x*), is only directed thither. There is no translation of the inflammation to the internal parts, for this reason, that these parts, which preserve nearly an equal temperature amidst every change of it externally, are not acted upon by the same hurtful power which annoys the external parts.

390. COLD, according to the common opinion, is not hurtful in this disease; because the rage of the disease is greatest under the operation of heat, which has an effect quite opposite to that of constriction (*y*). This fact is confirmed by stimulant diet, in all its articles, proving always hurtful, and by abstinence being always serviceable, and often alone making out the cure. And it brings a sufficient refutation of that mistaken notion, according to which, temperature is alleged to be more hurtful, and sweating more serviceable, than is consistent with the truth; as if there were no other hurt-

(*u*) Ibid.

(*x*) 113.

(*y*) Ibid.

ful powers but the former, no other remedies but the latter. In this, as well as in all other general sthenic diseases, it is the general sthenic diathesis alone which produces, and the solution of it alone, which removes, the disease : Which is a clear fact, and supported by the evidence of every part of this doctrine yet delivered. The pains of parts, which sometimes precede this disease, oftener happen without being followed by it, and, in both cases, have nothing to do with sthenic diathesis, upon which this disease intirely hinges, are a local affection, or belong to a very different general disease, rheumatalgia, of which more afterwards (z).

391. THE reason of the greater joints being affected in this disease, and the lesser ones in the gout, is the following : In rheumatism, because both the rest of the disease and the pains depend upon a violent sthenic diathesis ; therefore it is, that the greater joints, which, for the reasons assigned, undergo more of the diathesis, have also a greater share of the disease. But, as the gout consists in debility, its influence will be greatest, where there is naturally the greatest debility, and therefore in the ex-

treme parts, and those most remote from the centre of activity (*a*).

A Description of the mild Erysipelas.

392. BOTH the definition and explanation of the violent erysipelas (*b*), delivered before, suffice for those of the mild; but, in such sort, that the latter, both in its antecedent hurtful powers and symptoms, and in the whole nature of its cause, must be understood to be much milder than the former, and not only so, but a remarkably mild disease.

(*a*) To make this subject simple to any apprehension—A person has been exposed to intense cold a whole day. He comes home at night, is set by a warm fire, receives hot meat, and warm cordial drink. He is next covered up in his bed with an addition of clothes, receives more warm strong drink. He falls asleep, and next morning feels a pain in some part or other of his upper extremities, nigh, or between, the great joints; and, previous to that, a high state of heat and bouncing pulse, with a certain feeling of uneasiness in different parts of his trunk. The pains increase in the bed next night, in proportion to the increase of the general affection; and cold, evacuation, and abstinence from food, from alternation of temperature, cure him.

(*b*) From 382. to 387.

393. IT is often not so much a sequel of the sthenic cynanche, which is commonly called tonsillar, or the common inflammatory sore throat, as a supervention upon it before it has finished its course. It often appears alone, and unaccompanied with the cynanche, arising from a similar lenity of the hurtful powers, and manifesting a similar mildness of symptoms through its whole course.

394. NAY, in the same persons, in the same state of the hurtful powers, sometimes this erysipelas, sometimes cynanche, sometimes catarrh, promiscuously arise, and are all removed by the same gentleness in the method of cure (c).

A Description of the Cynanche Sthenica.

395. THE sthenic cynanche is a phlegmasia, with an inflammation taking place in the throat, and espe-

(c) I have often experienced them all, sometimes singly, sometimes all three, in the course of the same disease, oftener a combination of inflammatory sore-throat, and the mild erysipelas, and, as far as I could observe, could discern, that the degree of phlogistic state which produced them, and of remedies which removed them, were both gentle, the former as stimulants, and the latter as debilitating powers; and both so nearly of the same degree, that, in

cially the tonsils, never preceding the pyrexia : It is accompanied with swelling and redness, and an aggravation of pain in swelling, especially any thing fluid.

396. THE reason for the inflammation occupying the place mentioned here, has been given before (*d*). And, when it has once taken place, it is afterwards liable to frequent recurrence, because its seat being in the way of the most hurtful power (*e*), and less covered than other parts (*f*), is exposed : And the vessels, first distended by the inflammation, and then afterwards relaxed, take in an over-proportion of blood upon every increase of its impetus (*g*).

arranging them, I was at a loss which to place over the other in the scale.

(*d*) See 113. 342.

(*e*) Heat and alternation of temperature. See 36. with addition.

(*f*) See par. 168. If one is walking in the evening, when a sudden fog comes on, with cold and chilliness, he may cover his throat externally, but it is impossible to defend it internally.

(*g*) This is so liable to happen, when any person has once experienced this disease, that the increased motion of the blood in walking in a warm day, and then sitting down in a cool place, has sometimes produced ophthalmia, sometimes this sore-throat.

397. As the inflammation, like that of the other phlegmasiæ, never precedes the pyrexia (*b*), for the reason assigned (*i*); so, if an unskilful person should think it did, the reason of that is the gradual degeneracy of the general sthenic inflammation into a local disease, from its frequent recurrence, and always leaving a taint behind it in the affected part. This latter inflammation may happen without a general sthenic diathesis, and, therefore, without being followed by a sthenic cynanche; and it may accidentally coincide with the former, or sthenic diathesis, and therefore precede the latter, or sthenic cynanche. But, in both cases, it ought to be distinguished from the pure general case, for the sake of guarding against the commission of a hurtful mistake in the cure (*k*). In an asthenic habit, whether succeeding to the former or not, there is again another general inflammation, to be referred to asthenic diseases.

398. If any person can explain why the pain is

(*b*) See the definitions of them all, &c.

(*i*) See par. 168. 343.

(*k*) This might happen to a person under an asthenic diathesis, which would be increased by the debilitating plan of cure, and would be useless in the absence of diathesis.

aggravated in swallowing, he may communicate his knowledge ; if he cannot, it is no matter.

399. THE cynanche œsophagæa has been here omitted, because it is a rare affection, and admits of the same reasoning and cure as the tonsillar, from which it differs not but in the inflammation being farther down, and in some redness only coming within view. But, as there is a suspicion that it may be local, as when the œsophagus happens to be eroded or burnt by a stimulus, or some acrid matter ; the distinctions, therefore, should be attended to (*l*), and made use of for the sake of practice.

400. THERE is likewise a rare disease, sometimes happening in certain countries, never in others, called the croup (*m*). In it the respiration is laborious, the inspiration sonorous, with hoarseness, a ringing cough, and a swelling scarce to be discerned (*n*). It is a disease which infests very young children almost only. And, in all other particulars, it is of a doubtful nature (*o*).

(*l*) See above 81. 83. 170.

(*m*) by nosologists cynanche stridula.

(*n*) It is perceived upon dissection of the dead subject.

(*o*) I never saw this disease, but when I was so young a

401. CONCERNING which, when it happens to occur in practice, use the following marks of judgment. As the sthenic diathesis, in the degree requisite to the formation of actual disease, which depends upon a high degree of diathesis, happens less, either in the beginning, or towards the end of life; because the high degree of excitability in the former, and the low degree of it in the latter, admit a smaller degree of the effect of the exciting power, that is, a smaller force of excitement (*p*), than the long period of human age betwixt these two extremes; yet it is not altogether foreign from either (*q*). In childhood, the high degree of excitability compensates for the slightness of the stimulus; while, in old age, the high degree and force of the latter may compensate for the deficiency of the former, and suffice to induce some sthenic diathesis,

student, that any observations I could make, can be of no use to me now. There have been many battles of words about, whether it be inflammatory or spasmodic, without any adequate meaning of the differences betwixt these two words, at least, so far as to influence the practice; which remained much the same betwixt the parties, and probably the right one missed by both.

(*p*) See par. 25. and 26.

(*q*) Though it is seldom that either a child, or very old man, will be so sthenic as to need bleeding and much evacuation, yet they will sometimes.

even to that degree which constitutes disease. In this way infants undergo wonderful vicissitudes of excitement, and within the shortest spaces of time. This day they will show every sign of extreme debility, next day every one of restored vigour ; because the operation of any stimulus given them soon rises to its highest, upon account of their high degree of excitability, and sinks as soon to its lowest, upon account of its own small degree (*r*). Hence, every sthenic diathesis which happens to them, is short, acute, and soon removed (*s*) ; nor is their asthenic state of long continuance, or difficult to be removed ; provided there is no local affection (*t*), and a proper method of cure is employed (*u*).

402. THE marks of sthenic diathesis at this age are, great frequency of pulse, when compared with

(*r*) A child of mine was given over for death by his nurse : His mother gave him some of the diffusible stimulus. He slept two hours, and when he waked made signs, for he could not yet speak, to have a little pie, most of which he ate.

(*s*) A single gentle purge will do it.

(*t*) which very seldom, indeed, happens,

(*u*) Which, till of late, has been very rare : The antiphlogistic cure has made away with three-fourths of mankind, before they arrived at the seventh year of their age.

that of adults, more frequent than their own in health, distinctly meeting the finger upon feeling it ; some degree of costiveness at first, which becomes more free in the progress of the disease ; dryness of the skin ; burning heat, thirst, watching, strong crying.

403. The signs of the asthenic diathesis at the same age are, a pulse not to be reckoned from its frequency, small, falling softly like snow upon the finger of him who reckons it, so that he is uncertain if he touch it at all ; a very loose scouring belly, with green matter ; frequent vomiting ; dryness of the skin, heat greater than natural, and greater in some parts than others ; interrupted sleep, never refreshing ; a feeble voice in crying, fit to excite compassion.

404. THE former diathesis, besides other hurtful powers, is preceded by the use of sound milk, animal food, an abuse of opium or strong drink ; excessive heat after cold and moisture, which latter increases the debilitating effect of the former ; a strong set of simple solids.

405. THE latter, together with the known hurtful powers, is preceded by the use of milk from a

weak, sickly nurse; that of vegetable food, with sugar in it; watery diet; watery drink; habitual vomiting, habitual purging, both by other means used for the latter, and particularly by magnesia, given with the intention of absorbing an acid; cold not followed by heat; a weak mass of simple solids.

406. CONSIDER which of these sets of signs precedes or accompanies the croup, and whether its pyrexia be sthenic or asthenic. Weigh the different sentiments of authors upon the subject. Suspect their theories, but their facts still more. Be on guard not to be misled by the vanity, emptiness, and rashness, of young physicians; as well as by the obstinacy and bigotry of the older sort, which increases with their age and practice, to be bent by no force of reasoning, no weight of truth, scarcely by the power of God. Regard their minds as bound in the fetters of prejudice. Remember, that a whole age of physicians were in the wrong, except one man (κ), and persisted obstinately in their error,

(κ) The improvement which Dr Sydenham made was good for the length it went, which was, to use cool and gentle evacuants for the cure of the small-pox, peripneumony, and one or two more of the sthenic diseases. The bias, in favour of the alexipharmac practice, for the cure

in the case of the Alexipharmac physicians. And, reflect within yourself, good reader, whether the present physicians, who follow the doctrines delivered in the schools, judge better than their predecessors, and do not run into the contrary extreme of madness, doing as much mischief in fevers, and diseases of pure debility, as they did in sthenic diseases, and, in fact, take a wide range of spreading

of catarrh and measles, he never got over. His theories were vague, but with respect to the practice in the diseases among which his reformation lay, they were innocent. He attained not any idea of the nature of diseases depending on debility : And his practice was hurtful in them : He fell a victim to his gout, which could not have happened, had he been acquainted with but one disease of debility. His practice, even when right, was destitute of principle : He had no sort of comprehension of the doctrine of life as a whole, and as a department of knowledge distinct from all others. It would have been lucky, however, for posterity, had his successors done as much in asthenic, as he did in sthenic diseases. From that beginning, the ingenuity of some, at last under a right direction, might have brought out more information, and, by gradual and sure steps, at last attained a comprehension of their whole subject. But professors of universities ruin every thing : For, while they find out nothing themselves, they throw into false lights the useful hints of others. This was the effect first of the Boerhaavian, then of the Hoffmanian and Stahlian doctrines. See our Observations, Outlines, p. 85. to 149.

destruction among mankind. Thus secured against mistake, consider the cures of this disease which have appeared. If in those, or in any trial which you may make, you shall find, that either bleeding and purging, or antispasmodics, as they are called, that is, stimulants, succeed; then be assured, that, in the former case, the disease is sthenic, in the latter, asthenic; of which you will be still more certain, if you shall find that the exciting hurtful powers and symptoms, which have been enumerated, at the same time agree with the other marks of judgment.

A Description of Catarrh.

407. CATARRH is a phlegmasia, in which, to the general symptoms mentioned before (y), are added cough; hoarseness; and first a suppression, or slight increase of the excretion from the nose, fauces, and bronchia, followed afterwards by a further increase, arising from stimulant powers, often heat alone, but chiefly after a previous application of cold; and to be removed by debilitating powers, often by cold alone, guarding against heat (z).

(y) 331.

(z) See par. 112. 114. 117. 122. and all the stimulant powers, from 112, to 147.

408. THE explanation of the cough is the same as that given before. But it is freer than in peripneumony, and not avoided, because there is no inflammation in the neighbourhood to aggravate it, and raise pain (*a*).

409. THAT the hoarseness is owing to a suppression of the vapour which should be exhaled into the bronchia, may be known from this; that, when the hoarseness has remained long, almost without expectoration and cough, or with a moderate degree of them, while the sthenic diathesis continued in full force, and did not abate in the bronchia; upon the diathesis giving way, and the expectoration and cough becoming more free, the hoarseness abates, or goes off. That this can be effected by a stimulus of that kind and degree which constitutes sthenic diathesis, is shown by the effect of strained speaking producing temporary hoarseness, by silence removing the hoarseness, and cold drink relieving it.

410. THE suppression of excretion is that of the mucus and exhalable fluid, related before (*b*), and

(*a*) See par. 160. 355.

(*b*) See par. 408.

it admits of the same explanation that was formerly given.

411. THAT stimulants produce catarrh is evident from this, that heat alone, fulness in food, strong drink, and moderate exercise, for certain produce it; cold, cold drink, spare diet, and rest, as certainly and effectually remove it. It was, therefore, a very unlucky mistake, to think it arose from cold alone, and was to be cured by heat. On the contrary, cold is never hurtful in it, but when its action is succeeded by that of heat, to be explained as before (*c*). The occurrence of catarrh so often in summer, where its action can be a thousand times traced back to heat, but not to cold; the influenza never needing the assistance of cold, which catarrh often does, in the manner just now said; its never succeeding to pure cold, but immediately to heat, facts known to old women, to shoe-makers and tailors, to sore-eyed persons and barbers, unknown to medical authors and professors, all confirm the same fact.

(*c*) See 122.

A Description of the Simple Synocha.

412. THE definition of simple synocha is the same with that of phrenitis (*d*), excepting the symptoms affecting the head. It is a slight disease, ending in health, often in one, always in a few days, unless when new hurtful powers, either accidentally, or from the use of a stimulant plan of cure, have been superadded.

A Description of the Scarlet Pyrexia.

413. THE scarlet pyrexia is an exanthema (*e*) ; about the fourth day of which, or later, the face swells somewhat, and, at the same time, the skin is here and there affected with a red efflorescence, and then chequered with large spots ; which are afterwards to unite, and in three days end in little scales, as if branny ones. This eruption does not arise, but in consequence of sthenic diathesis produced from another source. And there is another similar to this, which accompanies an opposite disease, afterwards to be mentioned.

(*d*) See par. 361.

(*e*) See 330.

414. THE eruption, appearing at a certain time, and remaining for some time, must be imputed to the fermentation, requiring a certain time, different in different diseases, and is to be explained in a similar manner as before (*f*).

415. THE swelling of the face depends upon a greater degree of sthenic diathesis there, than any other equal part. And we are to imagine, that, besides the hurtful powers which usually produce it, it is increased by the contagious matter, now approaching the surface.

416. THIS matter, of itself, produces no morbid state, only giving the exterior and exanthematic form (*g*), and following the nature of the sthenic or asthenic diathesis. Hence, after its application, the disease which arises is sometimes sthenic, as this is, of which we have given a definition, sometimes asthenic, as that disease which we are afterwards to mention in its proper place. This view of it serves to reconcile the jarring and contradictory explanations, and methods of cure, of authors, who have gone into such controversies to settle its nature.

(*f*) See par. 367. and 378.

(*g*) See par. 375.

A Description of the mild Small-pox.

417. THE definition of the mild and violent small-pox is the same ; excepting that there are often very few pustules, never exceeding one or two hundred in number. Sometimes the place only, which was inoculated, is beset with pustules, without any other in the rest of the body ; and, besides these, there may be only one.

418. THE number of pustules, and crowded eruption, is occasioned, not by the nature of the contagious matter, nor by its quantity, but by the sthenic diathesis, in so far as it is induced by the sthenic hurtful powers, in which the matter has very little participation (*b*). If, therefore, that diathesis be prevented, and especially upon the surface, the eruption will never be crowded ; and, after it has appeared, if it be immediately removed, the eruption will never be dangerous.

419. As the contagious matter does not contribute much towards sthenic diathesis, for the reasons

(*b*) See par. 370. 372. 375.

alleged (*i*) ; so, that it does contribute something, is proved by a crowded eruption both appearing and increasing, when the diathesis, after the reception of the contagion, was not increased by the ordinary hurtful powers (*k*).

420. AND, therefore, while the excitement should be reduced below that degree which suits perfect health ; there are, however, certain boundaries, beyond which we should not proceed in the debilitating process.

421. For, when the sthenic diathesis is very much reduced, and the excitement immoderately diminished, there appears, over the whole body, an eruption quite unlike the variolous, of a high scarlet colour, and, in its progress, proceeding constantly from a spotted appearance into a continued sheet of efflorescence (*l*) ; which, unless treated upon a stimulant plan, would prove fatal.

(*i*) From 417. to 419.

(*k*) This, indeed, is a clear proof, that the matter contributes something, and that there may be a degree of diathesis, compatible with health, unless when it is increased, and the perspiration diminished, by such contagious matter.

(*l*) from the top of the head to the ancles, See above par. 220. and two notes.

A Description of the mild Measles.

422. THE definition of the mild measles is the same with that of the violent. To which all the reasoning that has been employed about the small-pox will apply. If, immediately upon the arrival of the catarrhal symptoms, the asthenic diathesis, contrary to every mode of curing this disease hitherto conceived, be removed, often no disease of that kind, which affects the whole body, follows : And the disease always proceeds with the same gentleness, as the small-pox treated in the same way (*m*).

423. THE catarrhal symptoms are of the same nature as in the catarrh, and admit of the same cure, that is, the asthenic (*n*).

424. CATARRH, and simple synocha, are free from all inflammation, whether general or local. The scarlet fever, and the mild small-pox and measles, are free from the general, and exhibit upon the surface, a local inflammation of no consequence.

(*m*) All this has been well proved, by every one of my children, and by an hundred patients at once.

(*n*) See par. 170. and 211.

A Description of the Sthenic Apyrexia.

425. THE sthenic apyrexia, which are equally free from pyrexia (*o*), and every degree of inflammation, arise from a sthenic diathesis, which has less effect upon the vascular system, than the other sthenic diseases (*p*).

A Description of Mania.

426. MANIA is a sthenic apyrexia ; in which the mind is disordered, and forms false ideas of every thing.

427. IN so far as mania does not arise from a fault of the substance of the brain, which is a local case that sometimes happens, the powers, which have the chief share in producing it, are excessive exercise of the mental function, and a high exuberance of passion. These, however, while they act more upon the brain than any other part, at the

(*o*) See par. 329.

(*p*) So much so, as never to have been thought in any sort connected with that affection we call pyrexia.

same time act more or less also upon the whole body, though not to the degree of drawing pyrexia after them (*q*). Which is proved by the disease being cured by a debilitating plan, and by other stimuli, as well as those just now mentioned, not immediately applied to the brain, but to a distant part of the system from it.

428. THE most powerful of those stimuli are, spirituous or vinous drink, and opium; and, perhaps, some other things, taken into the stomach, and first acting there. Of the other asthenic hurtful powers, some of themselves, and operating alone, have less effect in inducing mania; and yet, even they, by their stimulant operation, increase the force of those which have that hurtful effect; as is proved by the effect of removing them in relieving the disease.

429. If poisons sometimes produce mania, without hurting the substance of any solid part, their

(*q*) Compare this with par. 49. 50. 51. 52. 53. and indeed with that whole chapter, as the severest trial of the truth of it; nothing being more natural, than the supposition, that a madman is only affected in his head; but we shall find that not true.

operation must be considered as the same, as that of the general stimulants, their effect the same, and the disease a general one, and the same (*s*). But if these very poisons act by destroying the texture of a part, they must be considered as the origin of a local disease (*t*).

430. THE heart and arteries are less affected in mania, than in any of the pyrexial diseases; because, the hurtful power, which chiefly affects the vessels, too much food, has less concern in the number of the hurtful powers here. And yet that the food, superadded to the other hurtful powers, does prove hurtful even in this disease, is evident from a contrary power, abstinence, being, among other remedies, found of very great efficacy in restoring the healthy state. Which, with what has been said above, proves that mania is not a disease confined to a part, but extended to the whole system.

431. ALTHOUGH, in the diseases which have just now been mentioned (*u*), the pulse is commonly said, and believed, to be not at all affected, that, how-

(*s*) See par. 20.

(*t*) See par. 5. 6. 20.

(*u*) from 425. to 432.

ever, is not exactly the truth ; for in mania, so long as it continues to be a sthenic disease (*u*), more or less of sthenic state can be perceived (*x*).

The Description of Morbid Watchfulness.

432. PERVIGILIUM, or morbid watchfulness, is a sthenic apyrexia (*y*) ; in which there is no sleep, or no sound sleep, and the mind, in a startled state, is agitated with vivid, strong, or uneasy impressions (*z*).

433. THE hurtful powers which produce pervigilium, are the same with those which produce mania, but inferior in force. It is evidently produced by hard thinking, commotion, or disturbance of mind, in preference to other hurtful powers. The degree of thought which has that effect, is not ultimately excessive ; for, if it were, by effecting a temporary waste of the excitability, it would produce sound

(*u*) that is, so long as it is really mania,

(*x*) The characteristic of hardness of the pulse is never wanting, and therefore also fulness. (See 334).

(*y*) See par. 425.

(*z*) Read after ‘ est’ et mens excito animo, vivis, validis, aut molestis imaginibus, agitur.

sleep; or, if it repelled sleep, it could only act so by means of indirect debility, the consideration of which is foreign from this place (*a*). And the same is the degree of disturbance of feeling, which proves hurtful, in so far as it produces this disease: Every ultimate excess of which (*b*) either ends in sleep, or induces that vigilance, of which indirect debility is the cause. But it is not a single operation of the intellectual faculty, or of the state of any passion, or one which happens but rarely, which proves adequate to the effect. For the effect, in that case, would be either too slight, or of too short continuance, to merit the title of disease. It is an often returning, or deeply affecting, irritation upon the brain, and, therefore, one which leaves a lasting impression, which has any considerable force in producing this disease. In this last way, an eager, inordinate, and vast desire for the attainment of high objects of pursuit, the impulse which hurries on to the revenge of a great injury, and the horror which arises upon the perpetration of it, the fear of future punishment for crimes, are held up to us as productive of high commotion of mind, in the examples of Catiline, Orestes, and Francis Spira. As

(*a*) See 141.

(*b*) See 141.

often, therefore, as the mind is so excited in its ideas and passions, as not to be capable of being composed to rest and sound sleep, after a certain short continuance of those, or other stimuli; so often are we to conclude, that this disease takes place.

434. As the hurtful powers just now mentioned (*c*) produce this disease; so, there are others, that do not belong to this place, but are to be mentioned, which also repel sleep (*d*).

435. To pervigilium belong all the hurtful powers, which have been already mentioned in mania, (*e*), whether acting within or without the brain, but acting with less force, and which yield to the asthenic plan of cure.

436. As the powers stimulating vigorously in this way (*f*), and without any diminution of their sum of stimulating, produce pervigilium; from that we learn, that the cause of this disease is the

(*c*) See the par. 430. and 433.

(*d*) The rest of the sentence in the original is struck out, as belonging to asthenic watchfulness.

(*e*) See from 426. to 432.

(*f*) See 433.

same with that of the rest of the sthenic form of diseases (*g*), and that the same is the state of body in which every one of those diseases consists : Nor is it understood, that different hurtful powers, but precisely the same, with only a variation in the proportion of their force, which often happens to other sthenic diseases, precede this disease.

437. THE same fact is also discovered from the functions, of which, though these diseases are called apyrexiaë, or without pyrexial state, the pulse, however, is not altogether free from disease (*b*). On the contrary, it is as much stronger than in health, or in the predisposition to asthenic diseases, or in those diseases themselves, as there is more vigour, and more excitement upholding that vigour, in the system (*i*). And the state of the other functions, except those of the brain, which are chiefly affected, is truly the same as in the milder sthenic affections, or in the predisposition to these. But, if the brain in this disease, and in mania, is much more affected than the rest of the body—there is nothing unusual in that circumstance ; it being an universal

(*g*) from 141. to 148.

(*b*) See 430. and 431. and the Note to the latter.

(*i*) For a proof of their vigour, maniacs have often four times the strength, they used to have in health.

fact with respect to both diseases, and the predisposition to them, that some part is more affected than any other part (*k*).

A Description of Obesity.

438. OBESITY is a sthenic apyrexia (*l*), in which, in consequence of an excess of health, rich living, especially in the article of food; and an easy, sedentary way of life, the fat rises to the degree of incommoding the functions.

439. THAT obesity, so defined, is a disease, is understood from the definition of disease (*m*); and that it is a sthenic disease, appears from the certain signs of sthenic diathesis in it. Of which, the strong action of the stomach, whether the appetite or the digestion be considered (*n*), and the strength of the other digestive organs, are a glaring proof.

440. AND as, in this disease, the stimulus of the

(*k*) See Part First, Chap. IV. and in it 49. and 52. 159. 205.

(*l*) See 425.

(*m*) See 4.

(*n*) See par. 262.

exciting powers raises the excitement above that degree of it, which suits good health, to that in which sthenic diathesis consists, without which last there could not be such force in the action of the stomach, and of the organs which form chyle and blood ;—so, it is in common to this, with the other diseases called sthenic apyrexiaë, that the sum of all the stimuli is much less than in the other diseases of the same form, that is, those with pyrexia and inflammation ; that it never rises to the extreme height at which indirect debility is produced, and is never, indeed, so great as to be sufficient to have any considerable effect on the heart and vessels.

441. BUT it happens to all those diseases, that both these last, and all the other functions, get somewhat above the standard of the sound functions, and a great deal above asthenic diathesis. And the sthenic apyrexiaë differ from the other sthenic diseases chiefly in this, that the exciting powers keep much within that degree of force which wastes the excitability much ; as is perceived from the proof of the effect ; for they are diseases of much longer standing than any other asthenic diseases.

442. FROM which fact, however much the brain may be affected by its own proper stimuli ; however

great the quantity of blood in its vessels may be ;— unless to the excitement arising from these, that excitement, which the other stimulant powers produce, be added—it is certain, that the general effect will be much less, and that the united energy of all the powers has far more effect, than the separate force of any.

443. THE diathesis, then, in these diseases, is, upon the whole, less than in the rest of the sthenic diseases : that of a part, as of the brain in mania and pervigilium, and of the blood-vessels in obesity, is pretty considerable. The whole is, in general, as great as that in the predisposition to the other diseases, and exceeding its force in the labouring part. Hence it comes out, that, contrary to the nature of those other diseases, and similar to the predisposition to them, they are usually of long standing and duration ; and for this reason, that the mediocrity of the sum of stimulant operation never consumes the excitability, and always produces too much excitement. The great tumult of symptoms in the brain and blood-vessels, in these diseases, does not imply a great sum of excitement ; for this reason, that the affection of a part, however formidable, compared with the affection of all the rest of the body, is infinitely inferior in its degree

(*o*). However much, then, any stimulus presses upon a part, and from that spreads at large over the rest of the body ; unless, however, other stimuli, applied to other parts, sustain its operation, so as that the sum of the operation of them all may deeply affect the whole body ; the effect of the solitary stimulus, making a figure in a part, will be less considerable in the rest of the body. In fine, it must be kept in mind, that every violent disease always arises from the excitement which the united force of several stimuli has produced.

444. IN these sthenic apyrexixæ, as a certain part, the brain in the two first, and the blood-vessels in the last (*p*), is much more affected, and in greater proportion, than in the other sthenic diseases ; because the affection of the part is much less supported by stimuli acting upon the other parts : so, the stimuli, acting in that way upon the labouring parts, are, however, understood to affect the rest of the body, though less considerably. That this is the fact, is proved, by there being, in this case, no asthenic diathesis, and evidently such a sthenic one, as upholds the predisposition to other diseases of

(*o*) See par. 49. to 53.

(*p*) See par. 443.

the sthenic form; by the remedies, which affect other parts, as it will by and by appear, being aiding in the cure here, and by powers of a contrary nature always proving hurtful. Whence, it is an evident and certain truth, even here, where it might have been least expected, that every stimulus which affects a part, affects the whole body, upon account of the excitability being one uniform, undivided, property over the whole.

445. WITH respect to obesity in particular; that the other hurtful powers, as well as food, have more or less effect, one may know from the certain fact of the digestive powers, which depend upon the influence of these powers, being of such force and vigour, as to perform their functions more perfectly in fat persons, than in others, who are, nevertheless, not by any means weak. Yet these hurtful powers are applied in a degree short of that, which being ultimately excessive, or approaching nearly to that, puts an end to excitement by wasting the excitability, or which tends, by a high degree of disturbance, to exhaust the body.

446. THUS, passions are not with such persons, too stimulant; a circumstance known to the generality of mankind, among whom it is an adage, that

fat persons are commonly good-natured (*p*); while morose persons are, for the most part, lean. Thus, it is observable, that fat persons are averse to thinking, which is a great stimulus (*q*). They are averse to bodily motion, by which all the functions, and particularly that of the vessels, are much excited, and the perspiration proportionally promoted: and they have so far reason for it, that all motion is more fatiguing to them than to others. Hence, that quan-

(*p*) This must be taken with more than grains of allowance; since such is the effect of the different motives to human action received from example and education, that the passions themselves are drawn into a subserviency to every person's predominant pursuit. I have known a person in Edinburgh get great credit for his integrity, though that was not extraordinary, from roughness of manners and an affectation of passionateness, while the dissimulation of that real disposition is the more general engine among men of promoting their interest. At any rate, so much more than mere appearance of temper, which may be so much over-ruled, is necessary to the establishment of maxims, that I should think my life or property upon an insecure footing, if it depended on the good nature of a person, for which the only security was his fatness.

(*q*) The most poring persons are the atrabilarians, who, though they are not calculated for the elevation of mind that discovery requires, have, by their assiduity, contributed much to the improvement of many of the arts. They are commonly very meagre, indeed, and indefatigable in any pursuit, to which they give themselves up.

tity of fluids, which, under motion, is usually thrown off by the pores on the surface, and turned out of the course to the adipose cells, has a great opportunity of quitting the direction to the former, and of turning aside, in a state of rest, to the latter.

447. AFTER explaining the peculiarities of these diseases, it is now to be observed, that, since the affection of a part, in general disease, depends upon the general affection, is of the same kind, arises from the same exciting powers, and is removed by the same remedies (*r*); it is from that reasonable to believe, that the affection of a part, whether it be inflammation, or a greater affection of the brain or vessels, than of any other part, is not different in different cases, but altogether the same in all; that it only differs in some trifling circumstances of no signification, and by no means requires a different plan of cure, or affords fundamental distinctions; and that a mistake, which has had the most ruinous effect upon the art, must be done away. It is with propriety, then, that all the diseases which have been treated of, have been reduced, not first to two genera, and after to species (*s*), but, without regard either to genera or species, only, to two forms.

(*r*) See Part I. Chap IV. and particularly par. 53.

(*s*) which was attempted and dropped in the first edit.

448. FURTHER, as in all those diseases the whole morbid state, either in so far as it is universal in the system, or confined to a part, proves hurtful by giving too much excitement ; and as the remedies, which remove the general morbid state, also remove the portion of it confined to a part, and are never to be directed to a part (*t*), with the view of removing, by their action upon it, the disease, as if all locked up in it ; the meaning of all this is, to lay a sure foundation for the establishment of a certain series, or scale, of increasing strength, from perfect health to the most sthenic disease. In that scale, peripneumony holds about the highest, and obesity the lowest, degree.

449. PERIPNEUMONY and phrenitis in the upper end, are followed by two diseases, which sometimes equal them ; the violent small-pox and measles. These two are succeeded by a disease, which sometimes vies with them, the erysipelas, when accompanied with a most severe affection of the head. Equal to this, not in danger, but for the most part in the degree of diathesis, rheumatism comes next. Next to rheumatism is marked the mild and gentle erysipelas, far short of those above it in violence,

(*t*) See par. 56. and 92.

and claiming nearly an equal place to the sthenic cynanche, being much more nearly allied to the latter than any of the former. Those are the diseases accompanied with pyrexia and inflammation.

450. OF these two which stand lowest, the mild erysipelas and the sthenic cynanche, or common inflammatory sore throat, are of so doubtful a rank with respect to each other and catarrh (*u*), a disease without the accompaniment of inflammation, that it is doubtful which of them all should be set above the others. Below them, however, the simple synocha and scarlet fever, in so far as the latter is a sthenic disease, and in so far as the usual state of them both is considered, are to be placed without any hesitation (*x*). The lowest part of the scale of

(*u*) See 394. and the Note to it.

(*x*) The simple synocha is so similar to a gentle typhus, that it requires great judgment to distinguish them at first. The safest way, when the doubt cannot be determined, is to keep the patient in a moderate temperature, and in a state of rest; as any debilitating power, in case the disease should turn out a typhus, would be dangerous; and, though it should afterwards manifest itself a synocha, still its mildness renders the omission of any thing that might have been done, innocent; and it is always easy to take down sthenic diathesis.

sthenic diseases with pyrexia, is assigned to the small-pox and measles, in their mild state.

451. THROUGH this whole scale, it is not so much the titles and names which have been used, but morbid energy, which is regarded; it being the certainty derived from the cause, not the uncertain and perfectly deceitful consideration of symptoms, which was to be considered (*y*). The investigation of symptoms, which has hitherto been devoid of all benefit, has been of the highest detriment to the art; and as much in medicine, the most productive source of fundamental blunders, as the question about abstract causes had been in the other departments of philosophy (*z*), must be laid aside, and nosology damned.

452. BELOW the last mentioned diseases, mania, pervigilium, and obesity, are set. Betwixt which, and the diseases mentioned above, is the point of perfect health to be fixed (*a*).

(*y*) See par. 58.

(*z*) See par. 18. and look into Observations on the different systems of physic, and in it the Introduction throughout.

(*a*) It will be easy for the reader, with the directions above, to make out the table for himself.

The Cure of the Sthenic Form of Diseases.

453. To apply the indication of the cure of the sthenic form of diseases to practice ; that mentioned before (*b*) will be accommodated first to a violent degree of the diathesis and danger of parts, in such a manner, as that regard only will be had to the degree of force in the remedies (*c*).

454. WHEN, therefore, a violent diathesis is discerned, as in peripneumony, phrenitis, the small-pox, the measles, and erysipelas, in the highest degree of these three last, immediate recourse must be had to the most powerful and quickly effectual remedy ; and so much blood should not be taken, as many, who entrust nearly the whole cure of the disease to it, think (*d*), but more, however, than others are of opinion, should be taken away (*e*).

(*b*) See par. 88.

(*c*) See also par. 92.

(*d*) which is the common practice ;

(*e*) The most early among the Alexipharmac practitioners, after once making his escape from peripneumony without bleeding, fell a victim to the folly of his theory in the next attack. The Alexipharmacs, in general, were too moderate in their bleedings in the true, though few, sthenic diseases which require it, and all in the wrong in their use of heating stimulant prescriptions in them.

455. No measure suits all cases ; the quantity to be taken being different in different cases, as those differ in age, sex, strength, and in the degree of force applied by the exciting hurtful powers. In childhood, which, excepting the measles and small-pox (*f*), is seldom affected with the diseases we have mentioned ; and, in a very advanced age, which is also in less danger than that at the flower of human life ; sparing bleeding succeeds for this reason, that, at both those ages, it is a lesser degree of excitement which upholds the disease as a cause ; while, in the former, the high degree of excitability, in the latter, the necessity for more stimulus, or exciting power, than formerly, set bounds to the measure of the remedy.

456. A BETTER rule for limiting the degree of bleeding is the relief, or temporary solution, of the urgent symptoms. If, therefore, after blood has been taken, the great heat, the hardness of the pulse, the affection of the head or of the lungs, and dryness of the surface, shall have gone off, or much abated ; and now the temperature is discerned to be much more moderate, the pulse more soft, and less frequent, and the surface of the body more

(*f*) See par. 401.

moist, at least less dry ; if the pain is every where quieted, the breathing relieved, and the delirium removed (lg) ; then it may be looked upon as certain, that enough of the vital fluid has been shed for the time.

457. To obtain that benefit, in the most vigorous adult state, 10 or 12 ounces, and much less either before or after that period of life, will, for the most part, be found sufficient. As this rule will not answer in every case, when it fails, recourse must be had to that which recommends the abatement of the symptoms, as a direction more to be depended upon (*b*).

458. SINCE the local affection depends upon the degree of the general (*i*) diathesis, remember, therefore, that there is no occasion for any particular direction with regard to it, any farther, than to take advantage of its being accessible to help the general remedy, by an application of it to the part (*k*).

(*g*) The references for facts are, 159. 155. 334. 157. 174. 349. to 355. 154. 159. 184. 333. to 336. 155. 343. 354. 158.

(*b*) See 406.

(*i*) See above, 56. and 342. to 346.

(*k*) Ibid. An instance of such assistance may be the lo-

459. WHEN that has been done, and the first violence of the disease is now broken, we must next have recourse to purging the belly, as a great remedy in point of efficacy (*l*). To effect which, we should not employ violent means, such as many formerly employed (*m*); the stimulus accompanying the first operation of which being liable to be hurtful; but it is the gentle cathartics which should be depended upon, such as Glauber's salts, which are highly debilitating, and carry a great quantity of fluids out of the vessels. Though a man of good sense, in the last century, used these day about with bleeding; yet, if the violence of the disease should be urgent, there is nothing to hinder the use of them the same day that the blood has been taken.

460. PURGING, after a sparing bleeding, has more effect in overcoming sthenic diathesis, than any bleeding without it; because, as it has been mentioned above, in that way the debilitating power (which has always more debilitating effect in the

cal bleedings over the pained part in rheumatism, and the gout, and some other asthenic remedies, are aided by local stimuli.

(*l*) See 283.

(*m*) the Alexipharmacs particularly;

place to which it is first applied, than in any other), is applied to more parts ; and, not only to the greater blood-vessels, but also to a prodigious number of their terminations ; and the excitability is more extensively, and, therefore, with more equality diminished (*n*).

ω. VOMITING, which, in asthenic diseases, where it is pernicious, has hitherto ever been admitted in the common practice, and in sthenic ones, where it is of the greatest benefit, ever neglected, comes in here as a proper part of cure ; being of the same evacuant nature, and in another part of the same canal, and admitting of all the reasoning which has been applied to purging (*o*).

461. At the same time that the excessive, and therefore hurtful, use of the lancet, is superseded by those two last mentioned evacuations, its use, however, is not altogether to be laid aside in the diseases of excessive excitement ; and for this reason, that the excitement, by its stimulating operation, often rises to that high degree, which, from the

(*n*) See par. 483. 486. also 305.

(*o*) See the same. What respects vomiting here, is a supply of a great omission, which had run through both editions of the *Elementa Medicinæ*.

consumption of excitability which puts an end to its existence, threatens instant death (*p*).

462. BESIDES those remedies (*q*), the patient should always be required to abstain from every sort of food but vegetable, and in a fluid form, as well as from all strong drink, and indeed all but watery drink, acidulated (*r*). This direction does not seem to have been so much neglected in words by former writers and authors, as in fact and actual application to the practice; it having been delivered slightly, by the by, and as if it had been thought of no consequence, with such effect, that its force made no impression upon the mind of the reader or hearer. No stimulus is more powerful, and, therefore, in this part of the practice, more hurtful, than that of the articles of diet: Consequently, whatever quantity of blood is taken from its vessels, whatever quantity of serous fluid is carried off by the mouth and anus, if that stimulus is not roundly guarded against, all this evacuation may easily be frustrated. While that is the case, still fluid vegetable matter is not to be forbidden; and for this good reason, that watery matter

(*p*) See par. 281. and 283. 284.

(*q*) From 454. to 462.

(*r*) See 284.

is not kept in the vessels, but, easily entering the smallest of them, flows out, in all directions, by their various outlets; and, at the same time, supports the efficacy of another remedy (*s*), shortly to be mentioned.

463. CONJOINTLY with the use of the first bleeding, of the first vomiting and purging, and that of abstinence and watery drink, it must not be forgotten, that particular regard must be paid to temperature (*t*): For, if cold always debilitates, and if that is its proper operation (*u*), if it only seemingly acts otherwise, because heat succeeding to its action, or alternating with it (*x*), converts it into a stimulant one, if it alone is adequate to the cure of the small-pox (*y*), and prevents the violence of that disease, if it is the best remedy for catarrh (*z*), and, when heat is avoided, of the greatest assistance in every sthenic disease; it is not to be doubted, but that it is of the greatest benefit in the diseases of the highest sthenic diathesis.

(*s*) sweat.

(*t*) See par. 282.

(*u*) See par. 117.

(*x*) See par. 37. and the addition.

(*y*) See par. 121.

(*z*) See par. 407.

464. ITS operation in the small-pox, and in the rest of the sthenic diseases, is not different, but altogether the same. Nay, in all the diseases of this form, as cold alone is sufficient to effect the cure ; so, whenever the diathesis, which is the case in the diseases which make our present subject, rising to its greatest rage, demands instant relief ; because, in that case, every moment's delay brings instant danger ; because the remedies, which we have mentioned, are sufficient for the solution of the disease, of which we have the direct proof in the practice ; because that degree of cold, which could produce that effect, is neither always within our reach, nor can be managed by every person ; and many persons might not be disposed to believe its effects so beneficial : For those reasons, we should not desist from the plan of cure here laid down (*a*), and do our best for our patient, by taking off the blankets, and other clothes, by cooling the room, and, instead of laying him on a couch or bed, putting him into a chair.

465. THIS plan of cure should, for the most part, be preferred to that of the most intense cold ; for this further reason, that the shortness of the

(*a*) From 454. to 465.

time in which any one could possibly remain in it, would oblige him immediately to return to a higher temperature, which would produce a greater stimulus of excitement, than that under which he had been before his exposure, at least too great a stimulus (*b*).

466. SINCE such is the operation of cold (*c*), the power falsely imputed to it, of occasioning the striking in of the measles, is to be imputed, not to cold alone, but to heat and other stimuli; giving, as has been explained, more excitement (*d*), than if it had not preceded. And why not? If cold does not interrupt the eruption in the small-pox; but, on the contrary, by an enlargement of the diameters of the perspiratory vessels, which are shut up by sthenic diathesis, highly promotes the discharge of that matter (*e*): Why, in a perfectly similar case, should its operation be supposed to be different, not to say, diametrically opposite? Must we again have the trouble to refute the false notion of thinking that a cause, precisely the same, should produce contrary effects? Cold diminishes the eruption in the small-pox: It makes it disappear in the measles. What then?

(*b*) See 26.

(*c*) Look back from 463. to 366.

(*d*) See 26. and the addition, and 380.

(*e*) See 376.

Take a nearer view of the fact : Is its effect, in both these cases, to be supposed the same, or different ? How comes any person to know, that the matter, which has disappeared, is driven into the interior parts ? What proof will you bring of that ? Confess the truth : And be candid enough to acknowledge, that this is another relic of the alexipharmac doctrine, handed down to us, which supposed, that the stimulus of heat, as well as other stimuli, promoted, and that cold impeded, perspiration. And after a great man had shown the error of that doctrine, both in the small-pox and other diseases (*f*), because he did not carry the application so far as the measles, neither has any one of his followers, who never could step a nail's breadth beyond his words. But it might have been observed, if observation had been any part of their employment, that the measles was a sthenic disease as well as the small-pox. Are not all the successful remedies in both of the debilitating kind ? And as it was manifest, that in the small-pox also cold debilitated, or, in the common language, acted as a sedative, might not some suspicion have, from that very circumstance, occurred to their mind, that cold,

(*f*) In peripneumony, he took his patients out of bed, and set them in a chair, for the sake of cooling them, and avoiding the hurtful effect of heat.

in the measles, did not stimulate, or act as an astringent; and, in that way, repel the eruption, but performed the same operation as in the small-pox? Is it, to such a degree, difficult and up-hill work, to think and use one's own good sense, that a great part of mankind, even those who take upon them the business of teaching and taking the lead of others, in no case ever think of exercising a moment's reflection of their own? But, in this case, it may be contended, that the action of cold is peculiar, because, after the eruption, which it is supposed to check, has disappeared, all the symptoms increase in rage and violence. Consider what that circumstance makes for the argument, or whether it makes any thing, and not absolutely against it? Was the action of cold, which is supposed, followed by that of stimulant or debilitating powers? If it was by the former, the cause of the mischief must be imputed to them; which, as has been said just now (g), produce excessive excitement after a previous application of cold, and more than without it; if the latter, or debilitating powers, were used, then there would not be wanting a suspicion, that cold had a concern in the effect. But it is not so: And, in every case in which the action of cold has been

(g) in the last paragraph but one.

followed by sthenic diathesis, the true cause of that effect is not sufficiently guarding against the stimulus of heat, as well as that of other noxious powers. And this is most clearly proved, by the use of heat being positively ordered, instead of being forbid, in the common practice. Nor is that to be wondered at : For if the cause of catarrh (*b*) deceived physicians so much, the catarrhal symptoms in the measles could not fail to deceive them. And, if doctrines, discarded in words, are often kept up in fact ; what was there to hinder this part of the alexipharmac doctrine from meeting with a similar fate ?

467. If cold, therefore, can scarcely be so managed, as that the effect, occasioned by the accompaniment, the succession, or the alternation, of stimulants with it, may be prevented, whether that be the fault of the physician, or owing to the difficulty of the nature of the thing (*i*) ; it is, notwithstanding, a rule in common to the measles, and other exanthemata of the same stamp, to avoid heat, and compensate for the degree by the greater duration of cold, and to guard, with all possible care, against

(*b*) See from 407. to 412.

(*i*) Turn back to 465. and 466.

every stimulant power. It is now, then, most evident, that the opinion of cold being peculiarly hurtful in the measles, both in that, and every other disease of the same form, falls to the ground.

A Repetition of the Cure.

468. AFTER using the remedies which have been mentioned (*k*), when the symptoms are renewed, the same train of medicines must be again gone through: Blood must be again taken, emetics and purgatives again administered; nor must we desist from the use of the refrigerant and attenuant plan: And all these particulars must be executed, till the tumult of the symptoms be allayed, and the healthy state, at least for the time, be restored; and perhaps the repetition may be required a third time or oftener. After doing which;

469. IF the diathesis seems now nearly removed, if the affection of the head, of the lungs, or any internal one, seems alleviated or repelled; and yet there is some apprehension of a likelihood of the return of the disease: in that case, recourse must

(*k*) from 454. to 468.

be had to more gentle debilitating powers. Sweating, the stimulus accompanying the first operation of which, as the diathesis is now rendered mild or ended, the body will be able to bear, must be preferred to bleeding, vomiting, and purging. But before proceeding to speak of it, it seems proper to say a few things upon the sum total of blood which should be taken during the course of the whole disease.

470. As in single bleedings, so also in the whole quantity of blood to be taken, the sum should be a mean betwixt those, which the common run of physicians approve, while some think too much, some too little, should be taken. The reason for this recommendation is strengthened by the consideration of there being now less occasion for shedding a great deal of the vital fluid, since the cure is now more divided among the other remedies which have been mentioned. The age must be regarded, as was formerly recommended (1); the former mode of life must be looked to, the quantity of stimulus, which may lately have preceded the morbid state, must be considered, and the state of the body compared with the degree of the symptoms and the effect of the

(1) See 455.

cure. From those circumstances, a judgment should be formed of bleeding and other evacuations; and it should be estimated, what further of the same sort may seem proper to be put in practice, or what difference of management may be required. Upon the whole, it will be found, that there will be the less occasion for any one medicine, the more freely others have been brought into use; and it will be understood, that the danger of too great evacuation will be thereby avoided, and the health better secured (*m*).

471. WITH respect to the kind of bleeding, it should always be made from a very large vein; because the cutting a lesser one, or opening an artery, does not afford a sufficient quantity for the relief of the vessels, and arteriotomy is further attended with certain inconveniencies (*n*). As far as any certain rule, in an affair of such variety, can be established, two pounds of blood in three or four days, with

(*m*) See 286. and 305.

(*n*) The blood is ready to break out again after the tying up; and if, as some advise, the arterial twig should be cut through, it diminishes the number of the few accesses to this mode of bleeding; neither does there seem to be any use in destroying such vessels, especially as no good purpose can be shown for doing so.

the assistance of the other remedies, will, for the most part, be sufficient at the middle age of life, and less at a more early or later period.

472. ALL bleeding should be followed by vomiting and purging, so long as any considerable part of the sthenic diathesis remains; nor should the other parts of cure, which have been pointed out, be neglected. But purging, a single dose of which can, at any time, bring back a fit of the gout; which cures the sthenic cynanche, or common inflammatory sore-throat, and the mild erysipelas, when even the face or head is affected; which is of manifest detriment in fevers; which, in dyspepsia, in asthma, and every sort of diseases depending upon debility, whether direct or indirect, does very great and conspicuous mischief; and is a great part of the very bad common method of cure over the whole form of asthenic diseases; in proportion as it ought to be avoided in all those diseases, should be as certainly laid hold of in sthenic diseases, and not omitted in any considerable one, such as those are which require bleeding, but be managed according to the directions given (*o*) lately, and as it was directed to be managed before (*p*). And we

(*o*) See 461.

(*p*) See 283.

must, above all things, be on our guard against that diffidence in the use of this remedy, 'as well as in that of vomiting, where they are serviceable, and that confidence in them when of disservice, both introduced by the spasmodic doctrine; and know that they were both admitted upon a false and absurd principle (*q*).

473. As nothing, in asthenic diseases, has been more used than these two modes of evacuation, nothing with more hurt, and often with instantaneous destruction; so, for that very reason, nothing is more happy and successful than their use in the cure of sthenic diseases.

474. It is scarcely credible to say, how far the aversion to the alexipharmac method of cure has had the effect of branding the very best medicines, what a depraved use of them it has suggested, and

(*q*) The principle, at least with respect to purging, was, that it diminished perspiration, and, therefore, was understood not to act as an antispasmodic. A balance betwixt the excretion by the belly, and that on the surface, was talked of, and they were held for opposite operations. In such theoretical nonsense, they deserted their only good leader at least in those diseases, who alternated his bleedings and purgings, and, as I have found, upon the best foundation.

to what a degree it has perverted their proper use. Not to repeat what has been formerly said of that kind in other instances, sweating, which is of the highest service, and a most efficacious means of cure, in every moderate sthenic diathesis, in every degree of it which is not the highest, or where it presses not upon any organ of importance to life; that is, in all the diseases of this form, except in the beginning of those of which we are here treating, has, however, of late, been completely banished from the cure of every one of them, but one, not only as useless, but as hurtful; which has chiefly happened since the spasmodic doctrine began to be received into this country, and, for a few years only, gradually to gain ground (*r*).

475. BUT, in truth and fact, except rheumatism (which, at least as produced by one medicine, it is allowed to cure), if it most certainly either relieves or removes the sthenic cynanche, erysipelas itself, and catarrh, and the simple synocha, in proportion to the more free or sparing use of it; if that be known to the very vulgar, and most certainly to physicians, of any other than the spasmodic practice; what reason, what certain and well

(*r*) Turn back to 469.

proved fact, will any one bring, to show why sweating should not be used, after the most violent diathesis is much diminished by the other medicines, and is now reduced to that small degree, to which that remedy is adapted? What eloquence would be requisite to bring any man of sense into such a persuasion?

476. THEY will say, that the heat, which accompanies the first part of the operation of sweating, may be hurtful; for, as he never made trial of it, he has it not in his power to say, that, for certain, it will be hurtful (*s*). As that effect will readily be admitted in an high rage of diathesis, threatening indirect debility (*t*); it will not also be grant-

(*s*) It is laughable to hear such persons talk of their practice, from which they never can receive information; it being not the effect of any thing they know themselves, but what they have been told by others. In that way, without any exercise of judgment, without a single observation, which they can call their own, in the course of a long life, do they jog on, like the blind beggar led by his more faithful dog; or, like children in the play of blind Harry, groping about, with their eyes tied up, through the whole course of a practice boasted of, God knows, by no body who knows it but themselves.

(*t*) If the diathesis should rise within two or three degrees of indirect debility, in that case, the heat of the first part of a sweat, by exhausting the little excitement which

ed, that in a moderate degree of the diathesis, either from the beginning, or effected by the other remedies, and, consequently, after the plan of cure, which we have laid down, has been executed, that such heat will not be compensated by the great profusion of fluids taken away over the whole body ; and that, when this part of the vascular system has been freed from a violent stimulus, the diminution of excitement will not be more equal in all the vessels, and over the whole nervous system. If the numerous vessels, which open into the intestines and into the stomach, are so powerful in diminishing sthenic diathesis, how should a similar evacuation, in the similar perspiratory vessels, have no tendency to produce the same effect ? With which reasoning, if the facts just now related be further conjoined, what will any person have to say against the use of sweating, when a degree of heat, not greater than what cannot be avoided, attending the operation of the sweat, can no longer be hurtful, and the sweat itself certain to be of great service

remains, may have a most hurtful effect. But if the diathesis be any where below that high point, the addition of stimulus can be borne for the short time of its continuance ; and be afterwards much more than compensated by the large and continued flow over all.

(u). Let the spasmodic caviller against the use of that remedy, in the cases of sthenic affection where it is admissible, muster up all his facts, and all his theories; let him turn himself into all shapes, he will never produce a solid argument against this remedy. But what, again, is all this about? Will there never be an end of running from one extreme of error into the opposite? Shall no mean be found betwixt the alexipharmac plan of cure, and an equally bad or worse one? If that doctrine hesitated not to prescribe sweating in the rage of a peripneumony, and that, too, by means of the most heating stimulant powers; does it therefore follow, that a plan of cure must be admitted, which rejects the certain and safe use of that remedy, when conducted by the most gentle means? If it was the opi-

(u) In an excitement of sixty-seven, within three degrees of indirect debility, the heat in the first part of the sweat, by adding these, might kill the patient, if you will, without leaving any chance of relief from its evacuant effect. But, if the excitement be no higher than 60 degrees, the addition of the three degrees will keep greatly within the point of indirect debility, and therefore be safe; while the succeeding evacuation may reduce the excitement perhaps 10 degrees, and bring it within the range of predisposition; and a new course, or a little prolongation of this, carry it down to the point of health, and finish the cure.

nion of Dr Sydenham, that heat should be avoided in the cure of sthenic diseases (which was quite right, as heat certainly increases the excitement), are we, for that reason, to avoid that tolerable degree of heat, which accompanies a remedy the most powerful in restoring the healthy state, and thereby deprive ourselves of great benefit upon the whole? If such persons did not know, that several remedies diminished excitement more powerfully than any one; and, if they were to be forgiven for that, were they also to be excused for not seeing, what any empiric might have seen, that is, that some things were of service, and others of disservice, was that want, not of genius, which is not required of them, but of common sense, also to be pardoned? If thinking without a leader, and making any sort of discovery, was too much, and not to be expected from them; is it not somewhat surprising, that, out of a thousand persons, who had treated of every part of medicine, and entertained different sentiments from one another, in some measure right, and, no doubt, wrong too, they could squeeze no information, but always trod in the footsteps of one single man?

477. SWEAT, therefore, after the management which has been mentioned, is to be excited, and so

much the more determinedly, if there should seem something still wanting to the complete return of health, some degree of sthenic diathesis still remaining, and a spontaneous tendency to it should appear.

478. WHEN the signs of a spontaneous sweat arising are perceived, nothing more is to be done, but first to lay the clothes about the patient, remove the sheets, put the blankets next to his body, guard against the approach of air, and keep up the discharge for a sufficient length of time, at least ten or twelve hours. If, by this management, there shall ensue a copious and universal flow of sweat, there will be no occasion for giving a medicine. After it has succeeded, and increased the relief formerly procured, if it should sink in towards the end, it should at last be supported by Dover's powder, or by laudanum alone, covering the body, so as that it may get as quickly as possible to the surface, till the expected benefit be obtained. And to this management it must be added, that, if a draught of cold water be sometimes given, and then the body well covered up, and properly managed, the business often succeeds to our wish. But, as in the other cases, which belong to this part of our indication, the sweating must then only be set on foot,

when the mediocrity of the diathesis, procured by the other remedies, will permit ; so, in the small-pox and measles, because there is occasion, for a certain time, to allow the matter to pass away, we must also keep that in our eye, and never be too early in making trial of this remedy. Lastly, if the heat should happen to prove hurtful, if, at any time, the flow of the sweat should be attended with less relief, or with some inconvenience, it should be immediately stopped : For it was not for no purpose, but for that of making the remedies supply the defects of one another, and of reducing the excitement more equally over the whole body, that a number was recommended.

479. IN all the cases of a violent diathesis, all the remedies which have been mentioned, are, more or less, and differently on different occasions, in proportion as the remaining part of diathesis may require, each in a higher or lower degree, or in a larger or smaller quantity, to be brought into play, and the curative circle enlarged : And, besides them,

480. SOME of slighter consequence, such as acids and nitre ; some of uncertain use, such as leeching, cupping, and blistering, are mentioned, as of the

first consequence. Of these, the acids, in so far as they render the drink more agreeable, and, in an affection of the lungs, do not produce cough, and prove, in a certain measure, refrigerant, are to be permitted; and more certainly, if there should be a desire for them. Every body should know, that the refrigerant power of nitre is less than is commonly thought. In rheumatism, and the sthenic cynanche, if the latter should be unusually severe, blisters, leeches, and cupping-glasses, applied in the neighbourhood of the inflamed parts, may, in some measure, be of service (*x*). Nor does there seem to be any reasonable objection to the clapping a cap of recently dug-up earth upon the head in the case of phrenitis.

The other Part of the Indication of Cure.

481. To pass over to the other part of the indication of cure (*y*): When there is a gentler dia-

(*x*) All, from refrigerant, is an addition, in these words:
 “In rheumatismo, et cynanche sthenica si quando solito
 “gravior erit, vesicatoria et hirudines, vel concisa cute cucurbitulæ, juxta partem laborantem adhibita, communem quodam tenus curationem poterunt expedire. Nec, quo minus in phrenitide pileum ex terra recens effossa, capiti imponatur, objici posse videtur.”

(*y*) 451.

thesis in the habit, as in the other phlegmasiæ, and sthenic affections, which have not been yet named in the cure; as in the mildest state of erysipelas, of the sthenic cynanche, catarrh, simple synocha, the scarlet fever, and the mild small-pox and measles; a smaller force of debilitating power is required; and, therefore, neither all the remedies which have been mentioned, nor, in general, so much of each, as in the other part are demanded.

482. IN all these cases, not even with the exception of rheumatism, which depends upon a very great diathesis, bleeding is not necessary; and, with the exception of that disease, bleeding, with any degree of freedom, is hurtful: For, when the excitement is not the greatest, and, on the contrary, is moderate, scarcely exceeding that degree which produces the predisposition to other diseases; in that case, it is absurd to make use of a most debilitating power by way of a remedy, as if we had to combat a very violent disease. And, since the intention in bleeding is to prevent an ultimate excess of exciting power from producing a cessation of excitement in death, an event of which there is not the least danger, in a moderate diathesis, such as that which is the cause of the diseases here in question; for that reason, the cure must be adapted to the cause, and

bleeding must be either abstained from altogether, or very sparingly used.

483. IT is not, therefore, only in diseases of debility, which belong to the other form (in most of which it has, nevertheless, been, and still is, the custom to spill more or less of the vital fluid); but also in all the diseases of this form, except the very violent ones, that the lancet is to be restrained.

484. THOUGH in rheumatism the diathesis often runs considerably high, the usual profuse bleeding is not, however, required. For, as every diathesis is always greater in some parts than in any other equal one, so it is with the sthenic diathesis in this case, which is found much greater upon the surface of the body, than in any other equal space within. And the reason is, that the most powerful noxious agent, heat, succeeding to cold, or so alternating with it, that its own stimulus is increased by its effect (z), directs its principal energy to the surface of the body. Hence, after excessive bleeding, the disease, notwithstanding, often obstinately recurs. The cause of which fact, if the principles of this doctrine be well understood, cannot be ob-

(z) See 37. and addition.

scure. Bleeding diminishes the sthenic diathesis chiefly in the red vessels, less in any of their extremities, least of all in the perspiratory vessels, and those disposed of in the tract of the muscles; and still less in the last, because the operation of the bleeding is counteracted by that of heat: Which is an explanation confirmed by the certain testimony of physicians, who often complain that their favourite remedy fails them.

485. UPON which account, sweating, which we mentioned so lately, is remarkably adapted to the cure of this disease: To it, therefore, after a previous bleeding to twelve ounces, and observing the rule of temperature and diet before directed, must we have immediate recourse, if the diathesis happens to be considerably violent, and is signalized by heat of the body, by pains raging most in the night time, and by a strong and hard pulse. In order to render the sweat universal, and of sufficient duration, it should be brought out by Dover's powder, or laudanum, as before hinted, and kept up for twelve hours in full flow, and then some hours longer, or till the abatement of the symptoms, in the form of a moisture or free perspiration, and repeated when the symptoms return. The rest of the

cure must be entrusted to low diet and an exact temperature.

486. IN this case, after the sweating course, and also in that of a simple synocha, of the scarlet fever, of the sthenic sore throat, of catarrh, erysipelas, and the gentle small-pox and measles, when the diathesis is somewhat considerable, but far short of that range which constitutes the case of cure first taken notice of; we should use either a very small bleeding, and then chiefly the evacuations before-mentioned (*a*); then a slight and short sweat ought to be kept up not longer than eight or ten hours; and, during the whole time of the cure, we should go on with abstinence, weak drink, rest of body and mind, and cold, unless in the time of sweating, and even then, with as little heat as possible; and, finally, with tranquillity of mind, as these were formerly enjoined: The united use of which is perfectly equal to the removal of any of these diseases; but there will not always be occasion for them all.

487. OFTEN so gentle a diathesis occurs, that one or two of them, once or twice employed, is sufficient for the cure: So slight a diathesis, that is,

(*a*) See 305.

in which, unless for a little at first, the shivering, languor, and then heat, is very moderate, pointing out a proportional slightrness of diathesis upon the surface; in which there is scarcely any lassitude, showing the same moderation of diathesis in the organs of voluntary motion; in which the vigour of the stomach remains, manifesting a moderate excess of excitement in it; in which, in fine, the other functions over the whole body are sufficiently calm, and only suffer conspicuously in the labouring part: In these cases, often a single purge with Glauber's salt, often, without that, cold, rest, and abstinence, have conducted the morbid excitement to its salutary degree. A thousand times has the sthenic cyananche, a thousand times has catarrh and the simple synocha, nay, erysipelas itself, with affection of the face, been in that way removed. And the scarlet fever is often so gentle, as to yield to the same management.

488. IN this way must a constant regard be had to the degree of excitement and diathesis in the method of cure, and often terms must be disregarded. For, as it was with this view, that the simple synocha was before distinguished from the phrenitic, and the gentle erysipelas from the violent; so, it often happens, that catarrh rises to that magni-

tude which threatens, or brings on, a peripneumony, and that the latter proceeds with much more gentleness than usual. In which circumstances, it is the degree of excitement alone which ought to govern the physician, without respect to names.

489. ANOTHER useful caution here is, to judge of the state of the pulse, of the temperature upon the skin, and of the skin in other respects, with good sense, and due reflection upon these principles. The frequency of the pulse, in all sthenic diseases, is moderate: With that there is conjoined some hardness and fulness. Whenever, therefore, the pulse is very quick, it is to be suspected, that the sthenic diathesis has passed into the asthenic, the excessive excitement into a cessation of excitement, or that the disease has been sthenic from the beginning. To remove which doubt, and ascertain the truth, the habit of body, the age, must be considered, and an inquiry be made, to know whether the disease has been preceded, or not, by contagion. Heat of the skin is in common to these diseases and fevers, which are diseases of an opposite stamp, and therefore a doubtful mark. Which, as it depends upon an interruption of perspiration, from whatever source, is never to be strained into a proof of the state of excitement. And, since dry-

ness of the skin, which is in common to the same diseases, however different from each other, in the asthenic diseases depends upon debility ; in order to know the amount of what that symptom means, the other symptoms, and the exciting hurtful powers, should be considered. In fine, the only inquiry should be, whether the excitement is abundant or deficient, and all the signs should be consulted with that view ; nor are we to judge rashly of any peculiar form.

490. WHEN, therefore, the signs, which have been related, are compared with all the rest, and with the diathesis, we are then to set about the antisthenic or stimulant plan of cure. The violent sthenic diseases, which we first considered, can scarcely be confounded with the contrary ones ; the more gentle are daily confounded. But, while it is easy to distinguish them from the asthenic diseases resembling them ; if, however, any person should think the marks of distinction ambiguous, let him know, that, upon account of that gentleness, though the disease under examination should be sthenic, blood is not even to be let, much less under the apprehension that they may turn out asthenic ; to which last so debilitating a power is destructive, as it has so often already been said upon former oc-

casions ; and, with that information, let him understand, that his method of cure, conducted in that way, will be fenced and secured from all mistake. For, if the diathesis, though sthenic, be slight, bleeding will often precipitate it into the opposite, and will, at the best, be useless (*b*). If, on the contrary, the disease which passes for a sthenic one, should, in its progress, show itself an evident asthenic one ; in that case, every drop of blood which may have been taken, will go to the increase of the disease (*c*). Yet this pernicious and daily practice sends more men out of this world, than all the curses of human life (*d*).

491. As abstinence, cold, and the management of the belly, are sufficient to prevent a gentle state of the small-pox ; so, when that proper preparato-

(*b*) Suppose the diathesis be two degrees above the highest of the points of predisposition, at 57 degrees ; and bleeding, to the degree of producing 35 degrees of debilitating influence, be employed ; it is evident, the excitement will go down, not only the 17 degrees necessary to bring it to the point of health, but sink to 22 degrees, that is, three degrees below the range of predisposition to asthenic disease, and therefore complete the conversion of the sthenic into an asthenic disease.

(*c*) See 269. 281. 290.

(*d*) See par. 406. towards the end.

ry plan has been neglected, and now a crowded eruption appears ; besides those, trial must be made also of the other remedies (*e*), except sweat. But sweat must be avoided ; because, the tendency of the stimulus accompanying it, by increasing the sthenic diathesis on the surface, would be to check the perspirable fluid, and detain the contagious matter under the scarf-skin, and produce that pyrexia, symptomatic of the inflammation, which is called the secondary fever. This particularity of cure is taken from the particularity of the symptom just now mentioned, and forms no objection to the principles of this work. In perfect consistency with which, though there is all the proof which can be derived from sure practice, that the remedies we have mentioned are sufficient ; yet, before the eruption comes on, there is nothing can be objected either to sweating or bleeding, as remedies in common to this with every other sthenic disease (*f*). In fine, as the success of low diet, cold, and purging, in this manner, is certain ; at the same time,

(*e*) 453. to 468.

(*f*) The small-pox is, in one word, to be treated as any sthenic disease, according to its degree of morbid state, and the eruption is only to be regarded during the period of its existence, either with respect to the exception of sweating then, or of any thing else.

the other remedies which remove sthenic diathesis, in this case likewise operate to the same effect (*g*). It was proper to say so much, for the sake of showing the unexceptional steadiness and universality of the principles of this work. Nor are we to think, that the small-pox and measles differ from other sthenic diseases attended with pyrexia, but in the particularity of their eruption in running a certain course, and not admitting of an accelerated cure.

492. WE are not to wait the arrival of the symptoms of debility which follow a violence of diathesis, and threaten certain death by indirect debility, with the view, forsooth, that, when they have happened, we may cure them: On the contrary, they ought to be prevented by the early administration of the remedies now so fully commented upon. If that should be omitted, the consideration of the diseases which will be the consequence, and which is altogether an asthenic consideration, must be referred to the asthenic form.

493. As often as sthenic diathesis happens to be

(*g*) It is not, that low diet, cold, and purging, operate by any peculiarity, but because they debilitate to the degree, and in the manner required, of the other remedies.

conjoined with the pyrexia, which is induced by the operation of stimulants, of acrid substances, of compression, of obstruction, and similar hurtful powers acting upon a sensible part, of which we have examples in gastritis, enteritis, nephritis, cystitis, hysteritis, hepatitis, or the inflammations of the stomach, of the intestines, of the kidneys, of the bladder of urine, of the womb, of the liver (*b*); the diathesis, because it aggravates the pyrexia, should be removed by its respective remedies, to wit, the debilitating ones. And, when neither it nor the asthenic diathesis is present, nothing should be attempted: But, if the asthenic diathesis should be present, which very readily may happen, the stimulant plan should be proceeded upon, to prevent a very bad disease (*i*). Nor, when that is as much

(*b*) See 81. 83. 85. 87.

(*i*) As asthenic diseases to sthenic ones are in the proportion of ninety-seven to three of the hundred; such, also, must be the frequency of predisposition to them: The inference from which is, that, as we are seldom in the most perfect state of health, and, consequently, for the most part, under some degree of predisposition, all the chances are greatly in favour of that predisposition being the asthenic one. Hence, the impropriety of treating all local diseases in the same way, and as if they were general sthenic ones. Death has been too often the consequence of that practice, when the local fault, for which it was in-

as possibly attended to, are we to forget, that, in so doing, the principal affection is not touched ; that, on the contrary, it is its effect, not its cause, that is tampered with ; and that the full consideration of such cases belongs to the local diseases, afterwards to be noticed.

494. BESIDES all the remedies now mentioned, it is of advantage, in every degree of diathesis, to keep the mind easy and unruffled with passion or emotion ; a practice which, in the very high degrees of the diathesis, is indispensably necessary. Our attention will especially be directed to this particular, when we observe, that the stimulus of thinking, and of any passion, carried to a great height, has had a share in the production of the disease.

495. IN mania, therefore, and pervigilium, this direction must be particularly, and as much as pos-

sibled, was no more, perhaps, than a thorn pushed under a nail, a cut, or contusion of a finger. In such circumstances, however fully the person may have lived, wine is withheld, fluid vegetable matter prescribed, and the routine of every species of evacuation gone through. Dismal are the consequences of gun-shot wounds on this plan of cure. Turn back to the paragraphs 80. and 81. and the Notes subjoined to them.

sible, kept in mind. In the latter of which diseases, thinking, and every state of commotion, and more certainly an habitual practice in them, must be shunned, especially before going to bed. When the patient is resting there, he should have stupid books read to him; all inordinate desire, the propensity to revenge, the remembrance of every degree of criminality, of which he may have been guilty, should be diverted from his recollection (*k*).

496. THAT fact of great consequence, to give corroboration to this whole doctrine, is confirmed by this other, that the same things, which are serviceable in pervigilium, or the morbid watchful state, are also serviceable in mania, or madness, only administered in a higher degree, as that is a disease of a higher degree of excitement. Thus, it is not ease and tranquillity of mind which are to be prescribed here, both of which are quite gone, but a state opposite to that high commotion of spirits and irregular vigour in the exercise of the intellectual function: And, as an excessive energy of the intellectual powers, or of the animal spirits, or both, are the most noxious powers in this case; for that reason, the patient should be struck with fear and

(*k*) See above, 433.

terror, and driven, in his state of insanity, to despair. As a remedy against the great excitement of the organs of voluntary motion, the labour of draft-cattle should be imposed on him, and assiduously continued : his diet should be the poorest possible, and his drink only water (*l*). In water, as cold as possible, the patient should be immersed, and kept under it, covered all over, for a long time, till he is near killed.

497. If, in phrenitis the brain, in peripneumony the lungs, in rheumatism the external joints, possess more diathesis than any other part ; why may not mania and pervigilium consist more in an affection of the brain, upon which the principal noxious powers act, than of the other parts, over which the influence of those powers is less considerable ? Lastly, since remedies, the first action of which falls upon other parts, are of service in those diseases (*m*), that proves, that not even in them, where you might most be disposed to believe it, the whole morbid affection depends upon the part conspicuously affected ; but that the whole body is concerned in it ; that the excitability is one uniform undi-

(*l*) See 328. 430. 435. 436.

(*m*) Part I. Chap. II.

vided property over all ; that the force, both of the exciting hurtful powers and of the remedies, is directed to the whole, with the inequality so often mentioned (*n*) ; and that the foundations of this doctrine are sure and stable.

498. As these are the principal hurtful powers in mania and pervigilium, and the brain principally affected ; so, in obesity, the hurtful powers most considerable are, animal food (*o*) and rest, or sedentary life : in consequence of which last, the stimulus of exercise, which, by wearying and fatiguing the body, tends to indirect debility, is understood to be wanting. But since, in consequence of using the same food, both in quality and quantity, and the same indulgence in rest and ease, some persons become fat, others continue lean ; from thence it is ascertained, that all the digestive powers have more force in the former, than in the latter ; and, consequently, that the other exciting hurtful powers have

(*n*) Part I. Chap. IV.

(*o*) Because no effect can arise without a cause, the exciting powers, therefore, must here have operated with more force, than in the other case : And if it should be objected, that the circumstances in both cases were equal, the difference, then, must be set to the account of the greater vigour of the excitability in the case of obesity.

contributed to the effect, and that a proportional excitement follows. Of the hurtful powers which belong to this place, an easy exercise of the intellectual faculty, and tranquillity of mind, which are moderate stimuli, favour obesity ; over-strained thinking, and habitual indulgence in any passion, such as that of anger, the repetition of which constitutes ill-nature, oppose it. Corporeal motion, which diminishes the quantity of fluids in the system, and, as often as it is considerable, proves fatiguing and debilitating, opposes it. Equally unfavourable to it is hard drinking ; which, in a similar manner, wears out the excitement, by constantly wasting the excitability from the high degree, or long continuance, of its stimulus. On the contrary, the powers which favour it, are those which act gently, and with some excess ; but never attain that high degree of activity which inclines to indirect debility : They are powers which go on softly and pleasantly, which particularly keep up moderation in the perspiration, and thereby fill the vessels with blood ; but, because motion is avoided, they do not very much increase the excitement of the vessels, and, by means of the tranquillity of motion kept up in the latter, allow a fluid, which would otherwise pass off by the external pores of the surface, to turn aside into the cells of fat. Hence, though, as it has

been said before, an abundance of blood is indeed a very great stimulus; yet, without other stimuli, and that most powerful one which muscular motion affords; it is evident, that a considerable degree of stimulus can be borne without any considerable disease, and that it always produces a predisposition to sthenic diseases, but does not immediately bring them on. Hence, it is understood, what place in the scale of excessive excitement, or of sthenic diathesis, obesity holds; what the degree of stimulant power is; and what the stimuli, in particular, are which produce it.

499. As the degree of curative force must be accommodated to the degree of force in the cause (*p*); hence it may be observed, that, for the cure also of this disease, the common indication is sufficient (*q*); that is, that the excess of excitement must be reduced to the salutary degree, and a remedy opposed to every hurtful power, equal to the removal of it.

500. IN this case, therefore, as food is the principal hurtful power, less of it should be given, and

(*p*) See 109.

(*q*) 48. 453.

more exercise employed. These are sufficient for the cure (*r*).

501. BUT, for the sake of bringing both further confirmation, as well as illustration of this doctrine, it is to be observed, that all the powers, which very much affect the excitement, and in a greater degree than the hurtful power of this disease mentioned above, and which have a tendency, by their stimulant operation, to indirect debility, have the same effect; that they either prevent or cure obesity, and continue productive of that effect, till they induce that degree of meagerness which is connected with debility.

502. THE best method of lowering the diet, is to combine a quantity of vegetable matter with a moderate portion of animal. The next rule to that, is to refrain from the latter, and use the former in greater abundance. The first of these is suitable to all such persons as are liable to diseases of debility; such as the gout, the indigestion which, after a long time, succeeds to luxury, asthma, epilepsy, and similar others. The latter management is more accommodated to those, who otherwise enjoy great

vigour, are under predisposition to sthenic pyrexia, and in the flower of their age. But it is not, even in the latter state of the body, to be prosecuted, unless for a time ; because, such is the debilitating influence of that practice, that, while it is sufficient to remove any degree of obesity, especially with the addition of exercise, it is found to have signal efficacy in producing asthenic diathesis, and all the diseases depending on that.

PART IV.

THE SECOND FORM OF GENERAL DISEASES ;

OR,

THE ASTHENIC DISEASES.

CHAP. I.

503. **T**HE form of asthenic diseases, and which is to be called asthenia, for the sake of distinguishing it from the form of sthenic diseases, which is called sthenia, is a state of the living body, in which all the functions are more or less weakened, often disturbed, almost always with a more conspicuous affection of some function. In the treatment of which,

that order will be observed, in which the progress, from the smallest disease of this kind to the greatest, through all the intermediate degrees, is to be followed out.

504. IN this part of our subject, there occurs a great variety of symptoms ; of which, because it is without meaning, and even misleading, no use is to be made in marking the scale of diseases : But, for the sake of placing what is about to be delivered in a clearer, if not a more specious, point of view, we shall begin with a simple enumeration of the principal diseases to be afterwards fully treated of.

505. THE asthenic diseases are, macies, inquietude, or restlessness without sleep, the asthenic amentia, the scabby eruption, the slight diabetes, the asthenic scarlet fever, the rickets ; the hæmorrhæe, or general bleeding discharges, such as menorrhæa, or a morbid excess of the menses ; epistaxis, or bleeding from the nose ; hæmorrhoids, or the piles : and also three morbid states, seemingly in appearance opposite to these, the loitering, impaired, or suppressed menstruation ; next come thirst, vomiting, indigestion, diarrhœa, or loose belly, and colic without pain ; after these, the affections of children, as the worms, the general consumption,

called tabes, dysentery and cholera in the gentle state of these two ; angina, the scurvy, the gentle hysteria, rheumatalgia, asthenic cough, cystirrhæa, or mucous discharge from the bladder ; the gout of strongish persons, asthma, cramp, anasarca, dyspepsia with pain, the violent hysteria, the gout of weakened persons, the hypochondriasis, dropsy, chin-cough, epilepsy, or the falling-sickness, palsy, the lock-jaw, apoplexy, tetanus ; lastly, fevers, as the quartan, tertian, and quotidian, intermittents or remittents, dysentery, and cholera, both in their violent degree, synochus, simple typhus, the gangrenous sore throat, the confluent small-pox, the pestilential typhus, and the plague.

506. THIS scale of asthenic diseases is to be understood in this way ; that those diseases, which, in their most usual state, are slight, and claim a higher place in the scale, are sometimes more, sometimes most, violent ; and those, which, in their most common state, are severe, such as the gout of weakened persons, the pestilential fevers, and the plague itself, sometimes proceed with the greatest gentleness (*a*).

(*a*) See par. 450.

507. THE affections of parts, which often accompany those diseases, such as ulcer, tumor, increased excretion, bleeding discharge, inflammation, spasm, convulsion, point out, indeed, some degree of debility as their cause, but in such sort, that the same degree may happen without them. Hence, because it is the influence of debility which is fundamentally regarded in this scale, with the diseases, which are often conjoined with these affections, others, without them, as hysteria and the cramp, are blended; and, with the cases which are accompanied with spasm and convulsion, dropsy is conjoined, by keeping to the idea of an equal degree of debility; and all this without any regard to remarkable symptoms, but keeping the degree of debility only in view. Neither is the violent cholera kept back from its place among fevers, which last are distinguished by failure in the intellect and affections of the head, because it shows a degree of debility equal to the febrile. The idea, in proportioning this division, is to show, that true morbid energy does not consist in an affection of any parts, but of the whole body; and that the restoration of health is not to be attempted by a change of the state of parts only, but, without excluding that, by a change of the state of the whole system.

Of Leanness.

508. LEANNESS is an asthenia, less discernible in the other functions, but evident from the weakness of the digestive function; in consequence of which, the system, though receiving proper aliment, does not become plump.

509. SINCE the cause of this disease is debility, both in the rest of the system, and in the stomach and other organs of digestion; it thence follows, that the general indication for the cure of it should be chiefly directed to the most languid part, that is, the organs of digestion and the perspiratory vessels. More nourishing food, therefore, should be used; less labour undertaken; and moisture on the surface, or too free perspiration, should be checked, by more rest of body, by proper gestation and rubefaction, and a plan, quite contrary to that which is suited to the cure of obesity, should be pursued.

Of Restless Watching.

510. IN the asthenia called inquietudo, or restless watching, the other functions are under some

degree of languor, and the patient is affected with a constant necessity to change his posture, and toss about his limbs, without being able to fall asleep.

511. As the cause in this case, in the same manner as in every other general disease, is universal over the system ; so, it affects the organs of voluntary motion, and the brain in particular, with the inequality so often formerly mentioned (*b*) : Consequently, to remove the disease, ultimate excess in either mental labour, or exertion in any passion, as well as the opposite extreme of deficiency in either, should be avoided ; and that stimulus of both, which is agreeable, restored ; ultimately excessive corporeal labour, when it has proved hurtful, as well as deficient when it has had a concern in the cause, should be guarded against ; and the proper medium, betwixt the extremes of excessive activity and indolence, restored : Or the disease should be repelled by wine, and the other stimuli have each its proportion in the cure.

(*b*) See par. 49.

Of the Scabby Eruption.

512. IN the scabby eruption, the face is pale, the skin discoloured, dry, lank, and variously disfigured with pustules ; there is a lowness of spirits, and the functions of the body weak and sluggish.

513. IN this case, while the debility is universal, there is a prevalence of it in the perspiratory vessels. And, therefore, the chief parts of cure are, together with the remedies, the operation of which is directed to the whole system, such as nourishing food, strong drink, to support the perspiration by its respective remedies ; to bathe the surface of the body in tepid water ; to render it accessible to air ; to order clean linen for the patient, and every thing clean about his clothes.

Of the Gentle Diabetes.

514. IN that asthenia, which is named the gentle diabetes, there is an excess in the quantity of urine discharged ; but the profusion is not immoderate, as in the most violent case of the same name. The

organ of respiration labours under the same weakness and sluggishness, as in the scabby eruption.

515. To remove this affection, much more frequent than it has been hitherto believed, the system should be stimulated by food (*c*), by strong drink (*d*), and by proper exercise (*e*), such as is neither immoderately excessive, and therefore debilitating, nor deficient in degree, and therefore not supplying enough of stimulus : And, above all things, the perspiration should be sustained. The contrivances for checking the flow of urine, which have no existence, are to be passed over.

Of the Rickets.

516. THE rickets is an asthenia ; to the general symptoms of which are added an unusual bulk of the head, especially the fore part of it, and likewise of the knees and abdomen, a flatness of the ribs and meagerness.

517. THE rickets is a disease of children, chiefly

(*c*) See par. 266.

(*d*) See par. 268.

(*e*) See par. 270.

arising from uncleanness, want of dandling or exercise, cold, either without moisture or with it, food not giving sufficient nourishment, and bad air.

518. FOR its cure, the common asthenic indication must be employed ; remedies, of an opposite nature to the hurtful powers which excite the disease, must be searched for ; the surface of the body should be kept clean (*f*) ; the perspiration should be carefully restored, by the stimulus of pure air and of heat ; the child should be more carefully dandled, and kept much in the open air, animal food should be administered, vegetable withheld, and strong drink allowed (*g*).

Of Retarded Menstruation.

519. RETARDED menstruation is also an asthenia : In which, besides this discharge not making its appearance at that time of life when it should, other evidences of debility, such as a slender make of body, weakness, laxity of habit, want of appe-

(*f*) See par. 513.

(*g*) See par. 295. 303.

tite, or a craving for things not alimentary, paleness of the skin, and similar symptoms, appear.

Of Impaired Menstruation.

520. IMPAIRED menstruation is the state of asthenia, in which, after it has appeared, and the flow continued for some time, the discharge is made in too sparing quantity, or after too long intervals of time, with other signs of weakness accompanying it.

Of the Suppression of Menstruation.

521. SUPPRESSION of menstruation is that degree of asthenia, in which the discharge is totally stopped at any period betwixt their natural commencement and the time when, in the course of nature, they cease altogether.

522. AN inquiry must be made into the cause of natural menstruation, before it would be proper to enter upon that of the retardation, or deficiency, of the discharge in any of its degrees.

Of the Cause of Menstruation.

523. THE cause of menstruation is a conformation of the vessels which pour out the blood in this discharge, taking place at a certain time of life, that is, about the age of puberty, and a stimulant energy in women, more powerful than in the females of the other species of animals.

524. OF other animals, there are very few, the females of which undergo any sort of menstruation out of the venereal orgasm.

525. As all the vessels are gradually unfolded in the course of the growth of the body; so, the same thing happens to the genital and uterine vessels, but last of all to these. The ends of the latter, terminating, on the sides of the womb, about the age of puberty, are at last so very much expanded, as now to transmit, first the serous part of the blood, and then, after an effort kept up for some time, discharge formal blood.

526. AT this time of life, a great change over the whole system takes place. Now the desire for coition, a stimulus, never experienced before, pro-

duces a commotion over the whole body ; and, in preference to other parts, in the genitals of both sexes, in the female, over the whole region of the ovaria, womb, and vagina : By this stimulus, the uterus, its seat, being nearly incessantly solicited, is the more powerfully affected the more there is of excitability, hitherto acted upon by no such stimulus, existing in the system. Hence, among other organs, the muscular fibres of the next vessels, as well as the nerves interwoven with them, undergo the highest degree of excitement : This excitement, increasing over the whole system, again increases that in the uterus : The mutual contact of the sexes, whether in kissing, in shaking hands, or otherwise, fires both sets of genitals, and the uterus in a remarkable manner ; but the actual embrace produces the highest degree of that effect. The remembrance of each embrace remains, renews the dear idea of the delightful scene, and continues more or less to excite the uterus.

527. THIS new affection is further cherished and nourished by every stimulus which is usually applied to the system. Hence, in the absence, in the presence, of the beloved object, at all times generally, scarcely with the exception of that which passes in dreaming, a stimulus so steady, and the

more powerful, that its novelty implies, that the excitability, in this case, is intire, rouses the fibres of the vessels, already sufficiently unfolded, to violent contractions. The blood is carried into the region of the uterus with the greatest rapidity, a rapidity momentarily increased, in proportion as the blood, by powerfully distending the vessels, and agitating them by its impetuous flow, stimulates the fibres more and more, and thereby increases the activity by which it is driven on. This is the first cause of menstruation. In that way, the two circumstances, a sufficient enlargement of the diameters of the vessels, and the stimulus acting more powerfully, from its novelty, upon the unwasted excitability (*b*), are sufficient for the whole business.

528. THIS state is not inconsistent with other states of the body, but bears an analogy to some well known ones: Accordingly, different vessels, from the mere difference of their diameters, are subservient to different purposes: The perspiratory vessels are destined to the transmission of a vapour, the excretory vessels of the alimentary canal to that of a thin fluid, the renal vessels to that of a grosser one; so as to take off our surprise at finding vessels

(*b*) See par. 523.

fitted, by their degree of diameter, for the purpose of transmitting red blood.

529. THE reason that the females of other animals do not menstruate but in their orgasm, and not at other times, is, that it is only at certain times that they are exposed to that energy of stimulus which produces menstruation.

530. How much is owing to the stimulus just now mentioned (*i*), in the production of menstruation, is further evident from the following chain of facts: Which are, that, the less addicted to love women are, the less they menstruate; the more they give way to that passion, the freer do they experience this discharge within certain boundaries; that, before puberty, and after the time of life when menstruation ceases (which are the two periods at which the fitness for effective love has not yet commenced, or is now passed), the menstrual discharge is constantly wanting; that the privation of enjoyment, which, by its debilitating effect, produces chlorosis (*k*), and other similar diseases, is remarkable for bringing on a menorrhœa, or a retention of

(*i*) See par. 523. 526.

(*k*) or the green sickness,

menstruation ; and, finally, that girls, who are of a forward growth, of great strength, and large limbs, and, consequently, sooner ripe for love, are also more early in menstruation ; while those, who are weakly, puny, and of a small size, and, consequently, later in attaining the period of puberty, are proportionally late in attaining the first menstrual discharge. Lastly, if, like all the other functions, that of love is limited, at the same time, by its duration and degree ; and if, as the commencement of the love embraces is more or less early, it is proportionally more early or late in coming to its final termination, and if the duration of menstruation does not usually exceed that period ; that fact also, which it certainly is, added to those above, gives weight to our conclusion, and shows, in a clearer point of view, how much menstruation depends upon the venereal emotion. It is to be asserted, therefore, again (*k*), that besides the conformation of the vessels, suited to the function of menstruation, and the stimulus which has been mentioned (*k*), there is occasion for no other circumstance to explain either the commencement, establishment, or continuation, of the menstrual discharge.

531. THE cause of full menstruation, and that of a moderate degree of it, happening within the boundaries of health, is the same, only differing in degree; the degree of the latter being smaller, and that of the former greater.

532. AND, as the stimuli, mentioned above, explain why women menstruate more than the females of other animals; so, their immoderate operation upon women serves to show, why their effect, the menstrual discharge, becomes greater than natural (*l*).

533. THE stimuli which produce abundant menstruation, short of morbid state, are, unchaste ideas, and a high energy of passion. In this way, the influence of reading to one's self, or to others, of conversation, of pictures, contrived to kindle up lustful appetite, and the uncovering of parts which modesty conceals, which all produce a lively impression on the imagination of the thing so much desi-

(*l*) Women menstruate more than other females, because they are subjected to a higher degree of the stimulus, which is its cause; and such women as are exposed to more of the same stimulus than others, will also experience more of the effect, precisely upon that same principle.

red ; can be indistinctly felt by none perhaps but eunuchs. The same is the effect of nourishing food, and generous drink, and high seasoning ; and hence the proverb, without meat and drink love starves : Likewise, that degree of exercise, or even labour, which does not prove fatiguing, but which keeps within the boundary of stimulant operation ; as also an abundance of blood, both from that circumstance and from rich diet. Lastly, frequent and ardent dalliance, or *inconcessa hujus imitatio* ; all these increase the menstrual discharge, in proportion to the high degree of their stimulus, but still do not carry their effect to morbid excess.

534. THE same conclusion applies to the effect of the stimuli, which was formerly applied to an over proportion of blood producing sthenic diathesis : For the ultimate end of all the stimuli, which produce excessive menstruation, is such, that, if excessive menstruation, and an increase of love, be the consequence of the excess of the stimuli, one or other of the following must be the effect ; that is, it will either be such, as remains within the latitude of health, or such, as first produces sthenic diathesis, and then, in a higher degree of it, runs rapidly into indirect debility.

535. THAT that is the fact, is proved by the hurtful powers which produce excessive and morbid menstruation ; and by remedies, which are stimulant and suited to fill the vessels, removing the disease according to our late discovery ; and also by the unfortunate effect of the debilitating evacuant plan of cure in the same diseases.

536. As it is stimulant operation which produces both proper menstruation, and that which goes to a little excess ; so, when once menstruation is established, the conformation and stimulus, which have been mentioned, remaining, are sufficient to support it. The same operation is renewed during every interval of menstruation : The stimulus acts and quickens the motion of the blood in every part, but chiefly in that where it is most powerful and most required, that is, in the region of the womb. The blood, thrown into quick motion, and rushing with a more rapid flow, increases its cause, the stimulus : And, as this mutual stimulus continues incessantly to affect the women through the whole interval, when they are allowed scope of love, the uterine vessels are gradually unfolded, till, at last, within three weeks, or a lunar month, they are opened to their ultimate extremities : And when the fluid, first serous for a little, and afterwards sanguine,

and afterwards serous again for a little, has flowed one, two, or three days, in healthy persons, the vessels are at last shut up.

537. DURING the whole time of this process, the more excitability there is, and, consequently, at the beginning of each menstrual effort, the more violently the stimulus acts, and produces proportionally more excitement: And it has, from this time, always less and less effect to the end, in proportion as the excitability is more wasted; though, till the excitability, in so far as it has a relation to the stimulus, is altogether exhausted, the stimulus always adds something to the sum of excitement (*m*), though constantly less and less. The same is the explanation of the operation of food, of drink, and of all the exciting powers.

538. As what has been said of the stimulus, productive of menstruation, is conformable to the effects of all the other stimuli; the same is its conformity to the whole sum of menstrual effect, from the beginning to the end of the process. Thus, in the beginning of that long period, the force of stimulus is far the greatest, upon account of its no-

(*m*) See par. 36.

velty, and the unwasted state of excitability which relates to it. At this period, above all others, love, in persons in health, is exquisite ; and, in consequence of the stimulus which excites it, menstruation, when once established, is most exactly performed ; that is, it does not, either from deficiency or excess, deviate into morbid state.

539. BUT, after the beginning of this function, and when now the office of menstruation is established ; because, in this, as well as every other function, the excitability is gradually diminished in the progress of life, the stimulant power also has gradually less, and, at last, no effect : Consequently, in the same gradual way, the power of love in women, and, in proportion, that of menstruation, is diminished, and, at last, altogether extinguished.

540. WHILE both the faculties, that of love as well as that of menstruation, in this way decrease from the beginning to the end ; so, menstruation is often interrupted, in pregnancy, in suckling, in the diminution or suppression of menstruation. This interruption, in the two former, is natural, and suitable to health ; but in the diminution or suppression of the menstrual evacuation, it becomes morbid.

541. SINCE the stimulus, with the conformation of the vessels, is the cause of menstruation, and the latter depends upon the former ; so, again, the defect of the stimulus, and, therefore, of the conformation, produces both the retardation, diminution, and, at last, the complete suppression, of the discharge.

542. WHETHER ever the defect of menstruation, like that of perspiration, or of any internal excretion, as that in the fauces and alimentary canal, is sometimes to be imputed to sthenic diathesis, is uncertain ; for this reason, that, while the diameters of the small vessels on the skin and in the intestines are more nearly allied to such a contraction, for a reason formerly assigned (*n*) ; so great a force of excitement, so high a degree of sthenic diathesis, as would be sufficient to shut up vessels destined to the transmission of blood, is not easy to be conceived. And the doubt is further increased by a certain fact ; which is, that, both in the retardation of the menstrea, and in all the degrees of their diminution to their total suppression, when local affection is out of the question, there are evident proofs of a debilitating cause.

(*n*) See par. 57. 62. 112. 113.

543. To ascertain that fact, which is of the greatest consequence ; for this reason, that it directly interests the method of cure, and, if not explained, would leave a gap in our principles ; we have to observe, that, as some men, in consequence of the stimulus of excessive love, in the case of a most beautiful woman being the subject of it, have, by means of sthenic diathesis, been so inflamed, as to fall into a temporary fit of impotence, and been cured by bleeding : so, besides that, which is a rare fact (*o*), it is not very probable, that the patulous uterine vessels can be so contracted in their diameters, as to be incapable of transmitting their fluid. Nay, facts contradict it : The retardation, or deficiency of menstruation, receives a temporary alleviation from the debilitating plan of cure ; but the discharge is not usually also brought back ; on the contrary, it is more kept off. But, allowing an over-proportion of blood, and an excess of stimulus, to be the cause of the first deficiency of menstruation, after it has been removed by bleeding, and the rest of the debilitating plan of cure, can it again be the cause of a disease, which resists a degree of evacuant and debilitating plan of cure, which would

(*o*) I remember one instance in Dr Whyte, and, I think, I have only heard of another.

cure ten peripneumonies? And, since any stimulus, as well as that of an over-proportion of blood, may, from its excessive force, go into indirect debility; why may not the same thing happen in a disappointment in love, and first deficiency of menstruation; and, in both cases, atony, ushering in manifest debility, and not excess of tone, be the cause? As peripneumony, where the over-proportion of blood and sthenic diathesis is by far the greatest which ever happens, in consequence of indirect debility passes into hydrothorax; why may not a similar cause, in this case, produce a similar effect?

544. THE cause, then, of deficient menstruation, whether partial or complete, is a languid excitement over the whole body, especially in the uterus, from a deficiency of the stimulus of love (*p*), and of all those stimuli which support it (*q*), and from a penury, or under-proportion of blood.

545. THAT that is the fact, is proved by the hurtful powers mentioned in the retardation of menstruation, and other debilitating ones, in every deficiency of that discharge, producing each disease; it

(*p*) See par. 523. 526. 529.

(*q*) See par. 526. 527. 532. 537.

is proved by the stimulant and filling plan of cure removing it, and also by the hurtful effect of the debilitating plan of cure (*r*).

546. THE remedies for the cure of retarded menstruation are, rich food, generous drink, gestation, exercise accommodated to the strength, pediluvium, and semicupium, or the warm bath of the under extremities, and gratification in love (*s*).

547. THE same remedies are required for the suppression, and the same, but inferior in their degree of force, for the diminution of menstruation. When there is an unusual force of the disease, either in degree or duration, we must have recourse to the assistance of the diffusible stimuli.

Of Menorrhæa, or the excessive Discharge of Menstruation.

548. MENORRHOEA is an effusion of blood from the uterus, or an over-copious menstruation, or too long a continuance of it in a more moderate degree

(*r*) See par. 535.

(*s*) See par. 26.

of the excess, accompanied by all the symptoms of asthenia.

549. This disease is occasioned, not by an over-proportion of blood, not by a vigorous state of body, but by an under-proportion of the former, and an exhaustion of the latter. The hurtful powers, therefore, which produce it, are, food not nourishing enough, or too small a proportion of what is so, watery drink, or that over-proportion of pure strong drink which produces indirect debility, excessive heat, or cold not prevented from its debilitating operation by any stimulus, and salacity.

550. Its remedies are the reverse of the hurtful powers; rich food, generous strong drink, heat acting within its stimulant range, cold kept from direct debility by the stimulus of heat and other stimuli, and gratification in love.

551. THE effect of the hurtful powers and remedies of which we have spoken, that of the former in producing, and that of the latter in removing, the disease, and the failure in success of the debilitating plan of cure, all confirm the fact.

Of Epistaxis, or bleeding from the Nose.

552. EPISTAXIS is an asthenia, which, besides the general symptoms of the latter, is distinguished by bleeding from the nose, without any force behind, an affection troublesome at any age, but particularly to young persons under a rapid growth, and to enfeebled old age.

Of Hæmorrhoids.

553. The characteristic of hæmorrhoids, or the piles, added to other signs of asthenia, is a flow of blood from the anus, or the parts around it.

554. THE same thing, nearly, which has been said of menorrhœa, is to be said of the hurtful powers and remedies of this disease.

555. THE cause of the piles is manifest, from the hurtful powers producing it, the remedies removing it, and the unhappy effect of the common asthenic plan of cure; that is to say, it is debility of the whole body, from the deficiency of other stimuli,

and chiefly that of the blood (*t*): Which debility, while it relaxes all the vessels, and impairs their tone, produces that effect, in a special manner, upon the labouring vessels. The reason of which is, that, in consequence of the inequality so often mentioned, the chief prevalence of the cause operates in the seat of the urgent symptom (*u*). Nor is it to be thought wonderful, that the blood should flow through the vessels of the uterus which are patulous, and in the habit of pouring out blood, through the pendulous hemorrhoidal vessels, and those of the nose, which are delicate, and weakly supported, in preference to others. In this case, plethora, which has no existence (*x*), is equally unnecessary to our reasoning (*y*).

Of Thirst, Vomiting and Indigestion, as well as the Kindred Diseases of the Alimentary Canal.

556. THERE is a very frequently occurring affection, beginning with thirst, and proceeding to

(*t*) See par. 549.

(*u*) See par. 49. 50. 51.

(*x*) See par. 131. 134. and the addition.

(*y*) See par. 232.

vomiting (*z*). It often proceeds no farther than those symptoms ; it oftener ushers in the most severe affections, such as sometimes dyspepsia, or indigestion, sometimes colic, sometimes the gout, sometimes proper fevers, and many other asthenic diseases. Its most frequent source by far is weakness, being the attendant sometimes of too long suckling, sometimes of the diarrhœa, incident to women wasted with a long course both of that and repeated pregnancies.

557. THERE are two causes of as many affections, which have got only one name between them, that of thirst : The one is sthenic, the other asthenic (*a*). The former arises from the stimulus of salt, of rich and plentiful meals, of heat and labour, and some others ; never ending in vomiting till the sthenic state is over, which is seldom. Its cure, with which we have here no concern, is cold water, and the several debilitating powers.

558. THE asthenic thirst, which is our present subject, depends always on pure debility, sometimes indirect, sometimes direct (*b*). Its tendency is al-

(*z*) See par. 159. 185. 186. and 187.

(*a*) Ibid.

(*b*) See par. 185.

ways to stomach sickness, and, as that increases, to vomiting (*c*); and when the vomiting becomes any way considerable, the consequence is, that most acute pain, which a cramp in the stomach produces (*d*), and the other affection formerly explained (*e*). This progress is spontaneous, direct, and, for the most part, rapid.

559. THE hurtful powers here are all debilitating. The indirectly debilitating hurtful powers are, debauch in eating and drinking (*f*), drunkenness, extreme fatigue, ultimately excessive heat (*g*), violent passions (*h*), excessive exercise of the intellectual faculty (*i*), debilitating food (*k*), an overproportion of blood, now converted into an underproportion, together with the conversion of the sthenic diathesis which attended the former, into the asthenic, the inseparable attendant on the latter. The following powers act by a directly debili-

(*c*) See par. 187. 188.

(*d*) See par. 189.

(*e*) See par. 190. to 195. and from that to 198.

(*f*) See par. 128. 130.

(*g*) See par. 115.

(*h*) See par. 141.

(*i*) See par. 139.

(*k*) See par. 128.

tating operation ; cold corrected by no stimulus (*l*), cold drink, vegetable food (*m*), penury of blood (*n*), of other fluids (*o*), want of pure air (*p*), anxiety, grief, fear (*q*), and, in fine, that weakness of the system which arises from all those. The affection is often of a mixed origin, from a mixture of both these sorts of hurtful powers : For, as direct debility always increases the indirect, so does the latter the former, both in this and all cases (*r*).

560. A CORRUPTION of the common mass of fluids, whether it be called acrimony or putrefaction, has no concern in the cause ; because, while life remains, and the action of the vessels upon their respective fluids continues, such a faulty state of the fluids cannot make its havock over such an extent of the system, that being only the effect of a cessation of motion of the fluids under heat ; nor can it happen but in the extreme vessels and excretory ducts, which, by their atony, do occasion such a

(*l*) See par. 122.

(*m*) See par. 128.

(*n*) See par. 134.

(*o*) See par. 137.

(*p*) See par. 146.

(*q*) See par. 142.

(*r*) See par. 47. 71.

cessation of motion, and likewise in the alimentary canal.

561. THE cause of this thirst is the common one of every asthenia, but predominant in the throat and stomach, upon account of the atony of the salivary, and other excretory ducts (*s*).

562. THE remedies are also the common ones of every asthenia, to be accommodated to the degree of debility in the cause. In a slighter degree of thirst, a glass or two of brandy, or of any similar spirit, or, which is a better rule, given till the complaint is removed, is sufficient. It should be either pure, or diluted with a very little hot water (*t*). That should be followed by eating some animal food (*u*); and it should afterwards be supported by other stimulants taken moderately, and in the degree which suits good health. After which, the

(*s*) See par. 186. 187.

(*t*) The addition of cold water counteracts, that of hot co-operates with, the effect, which has been ascertained in a thousand trials.

(*u*) When the thirst was but just coming on, and not yet established, I have found a hearty breakfast carry it off. But when it is come to a head, the mixture of stomach sickness, which now begins to take place with it, renders eating impracticable.

proper practice is, to proceed to the use of the permanent stimuli.

563. WHEN the thirst, not quenched by these means, proceeds directly to vomiting, and when, by and by, an excruciating pain supervenes upon the vomiting; which, excepting the pain, is an affection, that, together with the symptoms which have been mentioned (*x*), should receive the appellation

Of Dyspepsanodyne, or Indigestion without Pain :

AND when, besides the pain of the stomach, now induced, the affection going downward to the intestines, sometimes produces a loose, sometimes a bound belly; at other times only a loose belly, and at others only a bound one; which is an affection, when unaccompanied by costiveness, that is distinguished by the title

Of Diarrhæa :

564. AND, when accompanied with costiveness, is intitled to the denomination

(*x*) From 556. to 562.

Of Colicanodyne, or Colic without Pain.

565. IN all those cases, recourse must be had to a larger dose of the drink : And, when that does not succeed to our wish, we must next fly to opium, and other more diffusible stimuli, if they are to be found : When, by these, relief is procured, rich and pure soups, without fat, should, from time to time, be poured in, and the canal carefully bathed all over with them. After which, the other stimulants should be added ; in the use of which, a straight direction, between direct and indirect debility, should be held, without the least deviation towards either. And our efforts must always be continued, till the disease is radically removed.

566. THE necessity for this direction in the cure is so much the greater, that, by neglecting it, or depending upon the common purgative debilitating plan, the consequence is, that often a proper general disease degenerates into a local affection. To proceed to the consideration

Of the Kindred Diseases of the Alimentary Canal.

567. AMONG them, besides those which have been mentioned above (y), there are not wanting others, which, when compared with them in the similitude and nature of the cure, absolutely claim this place in the scale.

Of the Diseases of Children.

568. THE diseases of children are, dryness of the skin, sudden slaver, or salivation of short continuance; a similar rejection of milk, without effort (z); green scouring; at other times costiveness; both commonly with gripes; the usual mark of which is, a pulling up of their knees towards their stomach, with very severe crying; unequal heat. A little more severe than those are the two following cases, the one of which has the name

(y) From 556. to 566.

(z) See 403.

Of Worms.

569. WHICH are distinguished by a thickening of the columna nasi (a); by a custom of picking the nostrils; by loss of complexion; by paleness of the face and of the rest of the skin; by a swelling of the belly; and, lastly, by the discharge of worms by stool. The most distinct symptoms of the other affection, or

Of Tabes, or the general Wasting of the Body,

570. ARE, meagerness all over the body, an unusual bulk of the abdomen, almost constant watching, such a weak, distressed, assiduous, and hoarse manner of crying, as excites tenderness and compassion.

571. THE hurtful powers, producing all those affections, are in common to them with every asthenia; that is, they are every thing which has an effect of debilitating the whole system, and especially

(a) It is that longitudinal depression which runs down from the partition of the nostrils, perpendicular to the upper-lip.

the alimentary canal : Such as, at this age, are, milk not nourishing enough, and, at the same time, acescent and flatulent ; want of food, or that made of watery matter and bread ; cold, and moisture, the latter increasing the effect of the former ; habitual vomiting and purging ; too little dandling ; mis-timing sleep and meals, and every part of management ; nastiness ; impure air ; a neglect of natural likings and dislikings.

572. THE remedies are the converse of all those : nourishing exciting milk ; three or four meals a-day, consisting chiefly of warm milk, pure animal soups, not weak, with a mixture of flower or bread of the same kind ; heat, without being carried so far as to produce sweat, or too much redness, and free from moisture ; laying aside every sort of evacuation ; a great deal of dandling and gestation ; a proper timing of sleep, of food, and of every part of management of these delicate systems ; cleanliness ; tepid bathing in cold weather, and cold bathing in warm ; and pure air, being out in the fields as often as possible, in all but moist weather ; such a judicious attention to desires and propensities, as not to neglect scratching any part which itches (b).

(b) See above 518.

573. THESE directions suit the gentler cases under consideration. To remove the more violent, while they also are not, by any means, to be neglected; at the same time others are to be subjoined. When the green scourings, great looseness, and boundness of belly, are vexatious, recourse must be had to pure wine, spirits, more or less diluted as the occasion may require, or, if there should be need, not diluted at all: More of the soup which has been mentioned, and also of a richer kind.

574. IF those should not succeed to the physician's mind, which will seldom be the case; in the same affections, and more certainly in worms, and still more certainly in the tabes, or general consumption, with the remedies which have been mentioned, the more diffusible stimuli of opium and musk should be alternated. Both sorts of remedies (*c*) should be so accommodated to the violence of the symptoms, as not to be dropped till the whole morbid tumult is allayed, and the healthy state replaced; which will, upon trial, be found more practicable, than has yet been imagined from the employment hitherto of the contrary plan of cure, to the great comfort of mankind in their sufferings.

(*c*) The durable and diffusible.

575. FROM what has been said, it will appear, that these affections of children all flow from the same cause, are removed all upon the same indication of cure, as any other asthenia, or disease of debility, which has either yet been, or is to be, mentioned in this work. The unhappy termination of them hitherto, is to be imputed, not to their cause, but to the depravity of the common method employed for their cure (*d*): Nay, though they do degenerate into local affections, as in the instance of the tabes, or general consumption, ending in an obstruction of the mesentery; in that of colic at every age, terminating in an inflammation, tumour, or complication of the intestines; and in those of both colic and long-neglected diarrhœa, running into a gangrene in the same part; that is a misfortune which never happens, when a proper method of cure is early enough used to remove the primary

(*d*) I cannot help repeating again, because the importance of the subject calls upon me to do so; that the practice of the new plan of cure, in all the diseases of children, as well as in the others lately mentioned, has ever succeeded in my hands, as well as in those of my pupils, to a miracle. I cannot say, that ever I met with an instance where it could be said to have failed. Let, then, who will compare that account with the known mortality which is every day the result of any other practice yet thought of in the profession.

disease : And, on the contrary, it most commonly arises from the perversity of that plan of cure, or the neglect of this, which is the proper one. To the same kindred diseases of the alimentary canal (*e*), further belong the two following ones, under the title

Of the gentle Dysentery and Cholera.

576. To which, every thing that has been said of those kindred ones, will apply : Or, if there be occasion for any particular observation upon them, it will be taken up, after we come to treat of them in their more severe and violent state. Of a similar nature to all these, but of a degree so much higher, as to merit the next place in rank below them, and, at the same time, not unconnected with them, as having the seat of its predominant symptom in the same canal, is the disease to which I have given the name

Of Angina.

FOR the symptoms and method of cure of which, turn back to number 222. where it is introduced in the explanation of asthenic symptoms.

(*e*) From 566. to the present paragraph.

Of Scurvy.

577. SCURVY is an evident asthenia : The principal symptoms of which are, want of appetite, loathing of food, laxity of the living solids considered as simple solids ; an oozing of blood, both from other parts, and particularly from the gums ; aversion to labour ; low spirits, and a languor in all the functions.

578. THE hurtful powers producing this disease, are the common asthenic ones, appearing in the following form : It is cold in this case, but conjoined with moisture in the northern seas, and, as we may well suppose, in the parts of the southern ocean of the same temperature, which generally produces the peculiar form of the disease. But with it all the other debilitating powers contribute their share : Such are, grief for the loss of liberty, relations, kindred, and friends ; a horrid dislike to their present state of life ; a longing desire for that which they have left ; the awe in which the severity of discipline keeps them ; the effect of a calm, where there is nothing to do, producing direct debility on them ; a storm, where they have to labour above their powers, as certain a cause of indirect

debility; their not having been allowed, till of late, fresh meat, which is the only nourishing and invigorating (*f*) form of it; their being kept upon salted and spoiled meat, and not even corrected by recent vegetable aliment, such as that is (*g*); watery or small drink; the terror which the expectation of a battle at sea inspires.

579. ALL those particulars prove, that scurvy is so far from being the effect of one or two hurtful powers, and from resting upon so narrow a basis of the cause producing it, as has hitherto been imagined, that it is rooted in a multiplicity of debilitating powers, and is a real asthenia, or universal disease of debility.

580. AND this fact is confirmed both by the true and false method employed for its cure: For, though nearly all the common powers concur in the production of scurvy; if, however, it be considered, how easily, upon the removal of the hurtful powers, and the patient getting a-shore, the disease is got under, by fresh meat, either with or without greens, by wine, gestation, and exercise; in fine, by the re-

(*f*) See par. 124.

(*g*) See par. 128.

covery of his usual manner of living ; it will be impossible to entertain a doubt of its being both an asthenia, and by no means a violent one. The pretence of its cure being effected by greens, roots, sour crout, and similar things, so much boasted of lately, which, without the remedies just now enumerated, could not fail, by their debilitating operation, to aggravate the disease, is derived from a noted blunder among physicians, by which they are led to overlook the most certain, simple, and evident facts, and take up, in place of them, the greatest falsehoods, or such facts as have a very narrow foundation in truth.

Of the gentle Hysteria.

581. THE gentle hysteria is a form of asthenia, of frequent occurrence among women, but very rarely happening to men ; in which a noise is heard in the belly, and the patient has a sensation of a ball rolling within the bowels, rising up to the throat, and there threatening the patient with suffocation.

582. THE striking symptom in this disease is a spasm, not fixed in a part, but running the course just now described. The disease attacks in fits, for

the most part leaving long intervals betwixt them, and often never recurring more than once or twice.

583. THE fits are soon removed by small doses of opium, repeated at short intervals. The intervals should be secured from danger by full diet, and a moderate and naturally stimulant management.

Of Rheumatalgia, or the Chronic Rheumatism.

584. RHEUMATALGIA is an asthenia, not so much a sequel of rheumatism when left to proceed in its own spontaneous course, as of the profusion of blood, and of other fluids, employed for the cure of it, and of too debilitating a cure ; with a change of the sthenic diathesis and the inflammation, which is a part of that, into the asthenic diathesis and inflammation. Paleness of the skin takes the place of complexion : The appetite is diminished, the involuntary motions are impaired, debility and torpor prevail over all. So far the disease is understood to be chronic. As in rheumatism, the joints are pained and inflamed : As that, which has been assigned, is the most frequent cause of rheumatism ;

so, it sometimes arises, not from a sthenic origin, and an excess in the means of reducing that.

585. THE cause of the disease is the usual one of any asthenia, predominant in the moving fibres of the muscles, situated below the skin over the whole surface of the body.

586. ITS worst morbid powers are, penury of blood, cold, especially with the addition of moisture, impure air, and, besides these, as many of the other powers, which act by a debilitating operation, as happen to be applied, contribute, in proportion to the degree in which they are applied to the morbid effect. Of these, excessive indolence, and the reverse, are particularly hurtful.

587. As all stimulants contribute to the restoration of the healthy state; so, the most powerful of them, in this case, is nourishing food, friction, gestation, wine, taken in moderation, exercise, rather frequent than violent, and being as much as possible in the open air. If it is an acknowledged fact, that rheumatalgia is one of the reproaches of physicians, it is more so than has been hitherto understood; it being an asthenic disease, while they at all times made use of the same kind of cure, as if it

had been the most sthenic, or even, upon the whole, more debilitating (*b*).

Of the Asthenic Cough.

588. THE asthenic cough is an asthenia, which, with the constant symptoms of the latter, depends upon a frequent expectoration, which the cough excites; affecting every age, which has been under the influence of either direct or indirect debility, and therefore old age, which is unavoidably the prey of indirect debility.

589. As consisting in indirect debility, it is the effect of an excessive violence of all stimuli which have been applied, either for a short time, or for a great part of life, their operation coming to the same amount; that of the former from its degree, and

(*b*) If they should pretend to say, that their bleeding, and other evacuations, were more moderate than in rheumatism; the answer is, that they were not so profuse at any given time: But, considering the length of time which rheumatalgy continues, the frequent, and almost constant evacuations, conjoined with every species of inanition, made the debilitating practice, upon the whole, far exceed that used in the sthenic case. No wonder, then, that much mischief was done.

that of the latter from its long continuance (*i*). In so far as its cause is direct debility, a deficiency of all the stimuli, leaving the excitability to be accumulated, allows this form of asthenia to happen from the spontaneous tendency of nature, of which life is only a forced state (*k*).

590. THE cough, which depends upon indirect debility, is cured, by reducing the stimulus which occasioned it, gradually and cautiously to the proper and natural degree. And when it originates from indirect debility, the increase of the stimulus, the want of which occasioned the disease, till the degree of excitement, which constitutes health, is replaced, effects the cure.

591. SUCH is the nature of direct and indirect debility, that if the remedies of the former be pushed beyond the boundary, the cough appears again ;

(*i*) See above, par. 29. 30. and 401.

(*k*) So great is nature's tendency to that particular increase of excretion, which forms the matter of expectoration in this disease, that every case of death, from disease, is an instance of it. Hence, the dead-rattle in the throat is universally the expiring symptom. See 72. and 326.

and the same is the event of the same excess in the use of the remedies of the latter (*l*).

592. FREQUENT and violent cough, with copious expectoration, has been always held for a sure mark of a vitiation, or faulty state, in the lungs. That faulty state was esteemed to be of a sthenic nature, and to give assurance of the presence, sometimes of phthisipneumony, or consumption from an ulcer in the lungs, sometimes bastard peripneumony, sometimes of a burning inflammation in the alimentary canal. In the former case, an ulcer, or, in their way of speaking, and what amounts to the same thing, tubercles, were believed to be the cause of the disease ; in the second case, inflammation, either in the intercostal muscles, or a different one from that which, in true peripneumony, was, in their opinion, its primary cause, was considered as the cause ; and, in the last case, no one of them would have hesitated a moment to have ascribed the state of the bowels to the only inflammation they were acquainted with, that which requires bleeding and evacuation for its cure. And no other inquiry was made, but whether the matter, which was spit up, was

(*l*) See par. 33. 34. and 43. 30. 134. with the addition, and especially 233. to 236.

mucus or pus. To ascertain which, premiums were proposed.

593. BUT, in fact, besides that, no phthisipneumony, no bastard peripneumony, as they call it, no inflammation in the alimentary canal, was ever cured by antisthenic or debilitating remedies ; and that, in the several trials which have yet been made, the first of these cases has been evidently assisted, nay, frequently completely removed, and the two latter thoroughly cured, in numberless instances, and in all in which it has been used by the sthenic, or stimulant plan of cure ; I say, besides these large and comprehensive facts, so little signification is there, either in the quantity or appearance of the expectoration, that in certain fevers, in other diseases of debility, quite free from all local affection, and, finally, in this very cough of which we are speaking, there is often a more violent cough, and a greater expectoration of matter, putting on every form and every appearance, than usually happens in a confirmed consumption, and where every hour is expected to be the last. And yet the whole tumult, hitherto so alarming, could be stopped in a few hours, and quite cured in as many days.

594. AND, who does not know, that there are

many persons, who have an immoderate cough, and proportional expectoration, for a whole and long life, whose lungs, however, are sound, and free from any organic taint? How often, in phthisipneumony itself, after finishing its course, and at last terminating in death, has the whole fabric of the lungs been found, upon dissection, as sound as ever happens in death from any cause (*m*)?

(*m*) There are several cases upon record, of the lungs, after death from a confirmed consumption, having been found perfectly sound. A most respectable pupil of mine went to Lisbon with a young gentleman, of considerable rank in Scotland, under a confirmed consumption, whom he brought back perfectly freed from his disease. He also saved either two or three ladies, I am not just now sure which, equally given up upon the common practice. He happened to assert, before the physician of the factory, that a person, just dead of the same disease, had no local affection in the lungs; and, upon dissection, it was found to be as he had said. I have restored many phthisipneumoniacs; but am obliged to own, that I have lost three, to whom I was called too late. Their loss, however, mortified me, because there were many reasons for my setting my heart upon their cure. I also lost in Scotland the most amiable young man of that kingdom, after curing a prodigious hemorrhagy from his lungs. This was he whom my pupil, two years before, brought home safe from Lisbon. But I was prematurely dismissed in this, and counteracted in the other cases.

595. THE cause of cough has hitherto been unknown. To pass over the sthenic cough, with which we have nothing to do in this part of our subject (*n*); the cause of the asthenic is the same as that of any asthenia, but more vehement in the fountain of expectoration, to wit, the exhalant and mucous arteries, the secreted fluids of which, inspissated by stagnation in the bronchia, compose the matter to be expectorated.

α. α. THE most powerful of the asthenic hurtful agents, in exciting asthenic cough, is cold, just as heat has been demonstrated the most hurtful agent in catarrh (*o*). Nay, in the asthenic cough, such is the rage of cold, that the slightest breath of air reaching the body, excites a most prodigious tumult of coughing, and brings out the whole series of subsequent symptoms; and heating the body in the bed as soon allays the cough, prevents the threatening, and cures the urgent disturbances (*p*).

596. IN this, as well as the sthenic cough, it is the serous and mucous fluids which chiefly flow to the bronchia. Which bear their pressure for a

(*n*) See par. 160. 233.

(*o*) See par. 407. to 412.

(*p*) All from *α. α.* is an addition to the original.

little, till, distended by the load, they can bear it no longer. The disagreeableness of the stimulus excites a commotion in the excitability of the labouring part, and, therefore, over its whole seat, and rouses the excitement. A cough arises, and throws off its cause, the collected humours.

597. THIS disease is always to be treated for its cure, first with stimulant remedies, and then with such as also fill the vessels. If indirect debility has been the morbid power, still we must stimulate, but at first with a force of stimulus little less than that which occasioned the disease, and then with still less; and, after changing, from time to time, the form of the stimulus, with less still, till we come down to the stimuli which are agreeable to nature, those which suit the most perfect health (*q*). In that way is ebriety, in that way is every form of intemperance, to be treated. If direct debility has been the cause, the cure will be a good deal more easy; that is, we must go on to stimulate more and more, till we get up to that point of excitement, to which we came down in the case of indirect debility. In this way is the first stage of phthisipneumony, as well as its middle course, and also bas-

(*q*) See par. 103.

tard peripneumony ; nay, most cases of the debility affecting young people, and the disease to which the name

Of Chincough

598. Is given, to be encountered in practice. Chincough is attended by a contagious matter ; which varies in its degree, but in such sort, however, that a sthenic plan of cure, adapted to the degree of the disease, for certain cures it. The change of climate or place is a tale (*r*). And, since the

(*r*) Still to the old tune ! “cantilenam eandem canunt.” They confessed they knew nothing about this disease, yet they prescribe change of air and place. If they knew nothing about the disease, how could they know what would be of service ?—Others told them so. But why do they prescribe vomiting ?—They heard that from their master’s desk at school, and found, that the same authority was the reason of others for doing the same thing. Why vomiting ? For the same reason, and because a relic of the doctrine of morbid matter has run through all their systems. Hence, in bleeding diseases, the universal rule has been to bleed ; in vomiting, to give emetics ; in diarrhæa, to give cathartics, in imitation, forsooth, of nature ! The symptoms of disease have been mistaken for efforts of the constitution to remove the disease. It is now, however, proved, that there are no such efforts. Every symptom, and particularly every morbid evacuation, is to be stopped. The contrary practice is as good sense, as it would be to propose bringing on a dead-rattle to cure the morbid one.

disease is an asthenia, vomiting, which is so very debilitating an agent, cannot fail to be of the highest detriment (s).

*Of Cystirrhæa, or the Mucus Discharge from the
Bladder of Urine.*

599. CYSTIRRHÆA is that mode of asthenia, in which, to the general symptoms of asthenia, and the particular ones of asthenic cough, there is an addition of mucus, rendering the urine turbid, without any previous pain, or symptom of internal local affection.

600. IN so far as this is a general affection, the laxity, proportioned to the atony, must be removed equally in it, as in other cases of increased excretion; and particularly the stimuli of health must be accurately administered.

Of the Gout of stronger Persons.

601. THE gout of stronger persons is a form of asthenia; in which, after a long habit of luxury and indolence, and especially, when to those hurtful

(s) See par. 137. and the addition in MS. and 294.

powers directly debilitating ones have been recently superadded, indigestion, or diarrhæa, or rather both conjoined, with manifest signs of a diminished perspiration, precede ; then the lower extremities are affected with languor. Of the lesser joints, almost always the one or other foot is seized with an inflammation, which, if not resisted by a piece of art quite new, will prove most severe, most painful, and of short duration, comparatively to its state, in that respect, in the after part of the disease.

602. THIS disease may be called the indigestion, or dyspepsia, of the luxurious, that is, depending upon indirect debility ; while dyspepsia may be denominated the same disease, that is, the gout of persons under direct debility, as having every symptom of the gout, except the inflammation (*t*). For, in diseases, so little is there in names, that not only

(*t*) There are very few persons, who, at one time or another in their life, have not experienced painful twitches in some part or other of one of their feet, especially when they happened to be in a state more languid and sluggish than ordinary. Every which case may be considered as a gout in miniature. But when the whole phenomena, except the inflammation, happen to any person, call it dyspepsia, or what you will ; it is to all intents and purposes a gout. Indeed, from all that has been said through this work, general morbid state appears to be a very simple af-

those diseases, of which we have been just now treating, but likewise asthma, hysteria, the colic, and most of the diseases which have taken their appellations from any remarkable disturbance of the alimentary canal, are equally prevented and cured by the same method of cure precisely. Which is, indeed, the reason why the gout has been ranked in the number of the diseases of the same canal.

603. A TAIN'T transmitted from parents to their offspring, and celebrated under the appellation of hereditary, is a tale, or there is nothing in the fundamental part of this doctrine. The sons of the rich, who succeed to their father's estate, succeed also to his gout : Those who are excluded from the former, are also from the latter, unless they bring it on by their own merit. Nay, if there be but only two diseases, in the strict sense of the word, they must be either all, or none of them, hereditary. The former supposition makes the hurtful powers superfluous, which have been proved to be every

fair, being nothing but an increase or diminution of the cause of the functions or powers of life, without any other difference, but that of the mere appearance of the symptoms to our senses, an appearance by which, when we look no further for information, we are also constantly deceived.

thing respecting disease ; and, as it is therefore absurd, so the truth of the latter must be admitted. The stamina, or bulk of our simple solids, are so given in our first conformation, that some persons are distinguished by a gross, others by a slender state of the whole mass. That variety of the stamina, if the exciting powers, upon which the whole phenomena of the life depend, be properly directed, admits each its respective state of health, suited to its respective nature, and sufficiently commodious, if the excitement suited to each, from a proper direction of the stimuli producing it, be properly applied. Though Peter's father may have been affected with the gout, it does not follow that Peter must be affected ; because, by a proper way of life, that is, by adapting his excitement to his stamina, he may have learned to evade his father's disease.

$\beta. \beta.$ If the same person, who, from his own fault and improper management, has fallen into the disease ; afterwards, by a contrary management, and taking good care of himself, both prevents and removes the disease, as it has been lately discovered : What, then, is become of hereditary taint (u) ?

(u) All this, from $\beta. \beta.$ is an addition to the Latin text in MS.

LASTLY, if the gout is the same disease as dyspepsy, arises from the same hurtful powers, is removed by the same remedies, and the only symptom, in which it can possibly be thought to differ, the inflammation, is only a slight part of the disease, depending upon the same original cause, and ready to yield to the same remedies; what signify distinctions about either, which do not apply to both (α)? Nothing by them further is set forth, than that a certain texture of stamina is favourable to certain forms of diseases, which (forms) are of no consequence, in such sort, that when the excitement is adapted to the stamina, even those forms can be prevented, or cured.

604. THE hurtful powers producing the gout are, first, indirectly debilitating, not effectual all of a sudden, nor commonly before the meridian of life,

(α) If I have kept off my gout for seven years past, after having been subjected to the most severe rage of the disease, might not I, much more easily, have prevented it before? But it may be said, perhaps, that excruciating pain makes a great difference in the scale of comparison of any two diseases: The answer to that is, that since the pain is as easily removed as the other symptoms, the difference is removed, and the weights in the scale equalised.

that is, before the thirty-fifth year of one's age. Rich food and too much ease have a very great effect, drink has less. To that, all which has a tendency to wear out life, to consume the excitability, contribute. But the first fit scarcely comes on, till directly debilitating hurtful powers have been super-added to the indirect (*y*). The following are particularly hurtful; abstinence, vegetable food, the hurtful effect of which is in proportion to the imbecility of the matter which composes it. The farinaceous substances, which are by no means safe (*z*), are less hurtful than roots, and these less so than greens (*a*); but fruits are the most hurtful of all

(*y*) My gout came on at the thirty-sixth year of my age, after five or six month's low living: It returned not again till betwixt five or six years after, because all the intermediate time I had been well supported: And this second fit was ushered in with low living, immediately previous to it, for near the same length of time, as before the coming on of the first fit. Nay, no gout ever came on but in consequence of direct debility; the indirect has not so quick an effect in that respect; at the same time it has a tendency to be hurtful, and, therefore, should be avoided.

(*z*) A mess of porridge, a dish used in Scotland, with small beer poured upon it, and taken over-night, would bring on a fit of the gout next day.

(*a*) The juice of turnips, of cabbage, and even pease-pudding, and pease-soup, which are commonly reckoned

(b). Cold water, in the height of the diathesis, given to quench thirst, immediately produces nausea, vomiting, and other distressing symptoms of the stomach, and of the rest of that canal, and hurries on a formal fit (c). The mixture of an acid with pure cold water increases the hurtful effect. Of the strong drinks, those prepared from barley by fermentation, that is, the different ales and beers, all the white wines in common use, except Madeira and Canary ; and, among the red wines, claret, indeed all the French wines, and punch with acid—all these are remarkably hurtful. And as indolence helps on with the first fit, so fatigue, especially that of walking, hurries on all future ones. Want of a sufficient quantity of blood is so hurtful at all times, that, though the theory of physicians led them to the notion, that the disease depended on plethora and vigour ; yet nobody ever thought of taking

substantial dishes, have the same effect. When those substances, after being boiled, are used with a good solid meal of meat, I have always found them innocent. Green pease, eaten with lamb or fowl, are both harmless and grateful.

(b) Apples and pears are such : But the cold fruits, as melons and cucumbers, are almost instantaneous in their hurtful effect.

(c) See 184. to 190. to 237.

blood (*d*). Vomiting is bad, and indeed one of the natural symptoms of a very bad state of the disease; but purging the belly is worse (*e*). Every evacuation has a similar bad effect, with this distinction, that the artificial are much more hurtful than the spontaneous.

605. ONE is to be excepted, that is, excess in venery, to which, though it be a spontaneous and natural, not an artificial, evacuation, gouty persons are so addicted, and so exceed others in power, that in the very middle of a very bad fit, they are not sparing of it. That effort at first is not perceived; but in the progress of age, and after many returns of the disease, it is felt at last with a vengeance (*f*). Great heat, by its indirectly debilitating operation,

(*d*) This is one of their many contradictions between theory and theory, and theory and practice.

(*e*) At any time I can bring on a fit by a single dose of Glauber's salt, unless I happen to be very strong, and quite free from all diathesis.

(*f*) At an advanced period of age, in persons who had been vigorous, an unnatural power of execution sometimes, even in actual morbid state, will take place, so as that the person will be able to outdo all his former doings in that way. But it is a false power; it is a symptom of disease: It is like unnatural appetite for food amidst a weakness of the powers of digestion.

does some hurt (*g*); but great cold, by its direct debility, much more (*b*). Impurity of air is inimical (*i*), as well as an interruption in the train of thinking (*k*); but hard thinking is more hurtful. A deficiency in the stimulus of passion is a pretty considerable hurtful power (*l*): But a high intensity of it will convert this moderate degree of the gout into that highest degree of it, which attacks the head; lays a snare to life, and brings on certain death (*m*).

606. LONG sleep is bad (*n*), as producing direct debility, by deferring the re-application of the stimuli which the watching state affords; but short sleep is much more hurtful, leaving behind it a degree of fatigue, still remaining from the effect of the stimuli of the former day (*o*). Often, after the upper parts of the body have been recruited with enough of sleep, after getting up, the podagric feeling, a state of languor in his lower extremities, and a demand for more sleep to them, is obliged to go

(*g*) See par. 115.

(*b*) See par. 117.

(*i*) See par. 146.

(*k*) See par. 139.

(*l*) See par. 141.

(*m*) Ibid.

(*n*) See par. 245.

(*o*) See part II. Chap. VII. 237.

to bed again, and give the unrecruited limbs their respective share of sleep. When a person is torpid from short sleep, how great is the luxury to cherish again, by the heat of the bed-clothes, all the parts which have been exposed to cold, that is, the whole surface of the body and thighs, but especially the legs and feet; which last, during the presence of the fit, is the seat of the inflammation; and how delightful, in that way, to make up the necessary complement of the sleep which is wanted!

607. To prolong the intervals of health, and prevent a fit, the remedies are all the reverse of the hurtful powers: They are, rich food taken in plenty (*p*), but remaining within its stimulant range, consequently of the animal kind, with a rejection of all sorts of vegetable matter, or a very sparing use of it; strong drink, not taken cold, unless when there is no danger of the disease (*q*) (at which time, cold

(*p*) See par. 266.

(*q*) I know well when I may take cold drink and use some vegetable matter; it is when, for some time past, I have been well supported, and feel strong and vigorous. I also know, if I have, either in food or drink, taken anything improper in kind, how to correct it; which is, by having recourse to a proper stimulus. By eating an exotic fruit, which had a mixture of the qualities of the water melon, the orange, and lime, in a quarter of an hour I

water is safe after a good meal), not mixed with acid, not acescent, not under a turbid fermentation while it is taken (*r*); gestation (*s*), exercise short of bringing out sweat, or giving fatigue (*t*), a full quantity of blood, which is procured by food and the motion just now mentioned (*u*), no evacuation (*x*), sparing venery, if that could be made good in such persons (*y*), a moderate temperature (*z*), kept equally between the extremes of direct and indirect debility, and inclining to neither; pure air (*a*), conse-

had an attack in my stomach, in the middle of my lecture last summer, at the Devil Tavern. By some of the diffusible stimulus, I repelled it, and went well on with my lecture. At other times I have prevented such an effect, by anticipating the remedy. This doctrine puts much more in our power: But we should not, therefore, play tricks with it. On the contrary, we have great reason to be thankful for the command it gives us over our health, and that also, by the use of means not inelegant, nauseous, and clunisy, but quite the contrary. The old motto of Ascleiades, *tuto, celeriter, et jucunde*, is verified and improved by the important addition of *salubriter*.

(*r*) See par. 268.

(*s*) See par. 269.

(*t*) Ibid.

(*u*) See par. 290. 295.

(*x*) See par. 290.

(*y*) See par. 619.

(*z*) See par. 112.

(*a*) See par. 303.

quently cleanliness, and being much in the open fields, a happy train of thinking (*b*); such a state of excitement as to passion, as keeps between fiery excess and stupid apathy, with as great tranquillity of mind as possible (*c*); moderate sleep, rather inclining to be long than short, a rule which should be so much the more observed, as the disease is of longer standing and greater severity. In fine, sleep should be allowed to continue till the most vigorous watching state is procured (*d*).

608. FROM what has been said, it must appear certain, that the gout of stronger persons is not also itself a disease of strength, or a sthenic one; and that it does not depend upon vigour of the constitution and plethora, as it has been commonly hitherto imagined; but that it is manifestly asthenic, like all the rest of the cases belonging to asthenia, and proved to be so by the strongest evidence; and that it is not to be treated by an antisthenic, as it has hitherto been the notion, but by a sthenic plan of cure; and that there is every encouragement for treating it in that point of view.

(*b*) See par. 513. 518.

(*c*) See par. 140. 303.

(*d*) See par. 600.

603. WHAT had hitherto deceived physicians, and passed for a cause of the gout, was the appearance of vigour and an over-proportion of blood, in most podagrics, from the bulk of simple solids, in consequence of their way of life, and often from great strength. But, good men! they never recollected, that vigour, and a great quantity of blood, was not a property inherent in animals, but that it depended upon foreign circumstances every day and every hour (*f*). If any one, according to that idea, who has happened to get a great bulk of simple solids, and who has had abundance of proper diet, and lived in that way to the thirty-fifth or fortieth year of his age, should all at once be deprived of all the articles of diet; and if a dwarf two feet high, who has lived poorly, and is, therefore, meager, and slender, should equally suddenly be put upon rich living, will there be the least probability, that the former will, notwithstanding his present absolute want, continue plethoric and vigorous; and that the latter, from being now crammed with unusual plenty, will continue empty, as he had been before? Is the fundamental proposition of this doctrine, in which it has been demonstrated, that we are nothing of ourselves, and that we are altogether

(*f*) See par. 10. 11. 12. 13.

governed by foreign powers, to be forgot? Is a person liable to the gout, who has for twenty years undergone an excess of stimulant operation, about the fortieth year of his age, or even afterwards, to be reckoned fuller of blood and more vigorous, either than another person who has lived lower, or than himself twenty years before? Where, pray, was the necessity of comparing gouty persons with others free from all bias to that disease, and not comparing them with themselves (*f*)?

(*f*) Such is the effect of the powers operating upon us, that a certain degree of that operation produces an effect which would not arise under another. If the customary operation has been moderate, habit will render the excitement arising from it, in some measure, sufficient for the demands of the system: Hence, day-labourers are supported upon less stimulus than gentlemen. Again, which is a circumstance liable to happen to the latter, if the customary operation has been excessive, there will be a necessity for a continuation of some degree of the excess. A podagric may be stronger than a labourer, and yet fall into the gout. For, though compared with the other person, he is strong; compared with himself at another time, he is weak: And the reason is, that though he is still better supported than the labourer, he is worse supported than the usual state of his system requires. Further, the labourer, though he falls not into the gout, may, by carrying his moderation too far, fall into indigestion, or some other disease, in every essential respect the same as the gout. A double inference arises here: Which is, that, though both excess and deficiency can be borne to a cer-

Of the gentle Asthma.

604. ASTHMA is an asthenia; in which, to the symptoms in common to all astheniæ, there is superadded a difficult respiration, returning at uncertain spaces of time, often unequal, without any unusual expectoration accompanying the fits.

tain degree, so as to require a continuance of them, or a gradual correction, yet they should be both avoided as entailing that sort of necessity for their continuance, while their effect makes no sort of compensation, being, at best, not the best state, that of perfect health, but a state of predisposition to disease; the one to sthenic, and, at last, indirect debility; the other to asthenic, as depending on direct debility. The perfect rule for insuring the healthy state, is to keep within the extremes of excess and defect, and thereby produce the due degree of excitement; and to apply all the exciting powers equally, each in its due proportion. The due degree may be secured by one or a few, but the equality of it over the system can only be secured by their equal application. This proposition goes to the bottom of two extensive doctrines, that of life, and that of morals; the last of which has, as yet, not attained to any thing like a fundamental principle. I intend to prosecute the idea upon some future occasion. I know a book filled with valuable ethic facts, but have not yet had time to consider, whether they all point to a general one, in which they all agree, and which reflects proof and confirmation upon them; without which it would fall short of scientific exactness.

605. THE same are the hurtful and curative powers here, as in the gout : In the same manner are the fits both prevented and removed (g).

Of Cramp.

606. CRAMP is also one of the cases of asthenia ; in which, often from pain, often from drunkenness, and not seldom from sweat, and disagreeable soaking heat, sometimes the wrists, sometimes one of the calves of the leg ; in fine, any external part, are affected. Of the internal parts, it is sometimes the stomach, sometimes some part in the intestinal canal, sometimes the bladder of urine, which suffers. The disease is not confined to indirectly debilitating powers, as producing it ; it also arises from directly debilitating ones, such as abstinence, vomiting, loose belly, and drinking water contrary to custom.

607. To remove this disease : when it does not exceed the gentleness which is here understood, the whole body must be invigorated by moderate sti-

(g) This has been proved, both upon other occasions, and particularly in the case of a young gentleman, who lived with me during my first management of my gout. See Preface to the Elements.

multi, every most urgent exciting power should be taken out of the way; gestation, and that exercise, which does not exceed the strength, should be put in practice. A more severe degree of the disease will by and by be treated under tetanus.

Of Anasarca.

608. ANASARCA is a form of asthenia, distinguished by water betwixt the skin and the flesh, occasioning an external swelling of the body, without the signs of any effusion of the same fluid into the interior parts.

609. IN the cure, the body must be invigorated, and in that part of it chiefly where the greatest laxity and atony prevails, which is the skin. This indication is answered by stimulating heat, by friction, by pure and dry air, by nourishing stimulant diet, and the Peruvian bark. No internal local affection gives occasion to it, which may be known from the symptoms yielding to this plan of cure.

Of Colic with Pain.

610. COLIC with pain is a form of asthenia, and a higher degree of the colic without pain ; in which, to the signs of debility in common to all the asthenic cases, are superadded a greater violence of the same symptoms, and twisting pain about the navel, with pain in some part of the belly, often enormous, and sometimes with a tumour, which can be felt externally (*b*).

Of the Dyspepsodynia, or Indigestion with Pain.

611. INDIGESTION with pain is an asthenia, which adds to the symptoms of indigestion without pain, a pain and gnawing feeling in the region of the stomach, and is highly expressive of a very severe disease.

(*b*) immediately above the brim of the pelvis, on the right side, at the place of the blind-head of the colon.

Of the violent Hysteria.

612. THE violent hysteria is a higher degree of the gentle hysteria; in which, besides the symptoms there described; mobility and changeableness of mind, disposition to sleep, convulsive state, and a great resemblance to epilepsy, are conspicuous. The temperament, which favours hypochondriasis, is of an opposite nature to this, which is commonly called the sanguine. Both the temperament and predisposition, in this case, are produced by a moist, lax, set of simple solids.

Of the Gout of weakened Persons.

613. THE gout of weakened persons, which is an increased degree of the gout of strong persons, is that asthenia, in which the inflammation runs out to greater length, and, at last, does not form at all; and the general affection increases in violence, in obstinacy, and, at last, attains its highest degree; exhibiting, towards the end of the disease, almost all the symptoms of debility, every form of asthenia, and sometimes, by a false resemblance, counterfeiting synocha.

614. As the diseases affecting the alimentary canal, formerly mentioned (*i*), have, in a great measure, a common nature; so, these also, that is, the colicodynia (*k*), dyspepsodynia (*l*), the violent hysteria (*m*), and the gout (*n*), are equally participant of the same, differing only from the former in their higher degree of violence. Their most distinguished symptoms are either spasm, which takes place in the colic, and indigestion, both with pain, or a spasmodic convulsive affection, distinguishing the rest. But neither, in that respect, do these differ from each other in any thing essential; since they all, without distinction, depend, not only on debility, but also nearly upon an equality in the degree of it, as the similarity of their morbid powers and remedies proves. For a very full explanation of spasm and convulsion, go back to the following numbers, 188. to 195. and from the latter to 201.

615. FOR the cure of them all (*o*), abstinence, fatigue, evacuations, acids, and acescents, cold, di-

(*i*) From 556. to 576.

(*k*) See par. 610.

(*l*) See par. 611.

(*m*) See par. 612.

(*n*) See par. 613.

(*o*) Peruse the whole of Chap. IX. Part II. from number 281.

rectly and indirectly debilitating passions, the debility arising from exertion of the intellectual function, and impurity of air, must be avoided. The cure of every one of them must be stimulant. When each of them is but slight, beef soup, and similar rich ones, which act partly by dilution, partly by a nourishing and stimulant operation, in the weak state of the stomach, and by supporting the system; and afterwards, when the strength is so far recovered, solid animal food, and moderately diluted drink, which, at last, confirm the strength, are sufficient. In a higher degree of violence of any of them, while the soups should still be continued, at the same time pure strong drink should be administered. And when the violence of any case baffles this whole form of stimulus, recourse must be had to musk, volatile alkali, camphor, ether, and opium. These must be administered in large doses; and all acid and fermenting things, every thing cold, though accompanied with stimulus, must be guarded against.

616. For the patient's management in the intervals, all debilitating powers must be avoided, such as, fatigue, abstinence, cold, and excessive heat (*p*);

(*p*) See again, the same Chapter, which compare with the preceding; the eight of Part II.

and take it for a certain and demonstrated fact, that the fits of recurrent diseases do not return from any inherent power of nature, but from human folly. Accept of that as a joyous piece of news, and such as nobody every expected. The recurrence of fits of the gout itself is not unavoidable (*q*); but, by guarding against the hurtful powers mentioned, may be repelled for any length of time; and, when it happens at any time to come on from the fault of the patient, it can often be removed in two hours, and almost always in as many days, and the state of health secured in every respect. In all the same diseases of similar vehemence, whenever any stimulus, from a long continuation of its use, has begun to have less effect, we should lay it aside, and proceed to the use of another, from that still to another, and in that way go over the whole circle (*r*).

Of Hypochondriasis.

617. THE hypochondriasis is an asthenia, in which, with the symptoms of dyspepsy, there is a noise in the belly, flatulency, and uneasiness, and a rooted opinion in the patient, of the disease being

(*q*) See par. 597.

(*r*) See par. 41.

always worse than it is. The way is paved to the disease by a dry set of simple solids, and that temperament, in which there is a natural slowness to passion ; which, however, once excited, rises to the highest violence, and continues long with obstinacy. It is further distinguished by a fixed attention of mind, whereby the patient is liable to dwell to excess upon any pursuit or study, and not to be easily diverted to another ; as also by a dry state of the surface of the body, a rough skin, with black hair, and black eyes, and always a dark complexion and serious aspect.

618. FROM the definition given of it by hypochondriacs, it is beyond doubt an asthenia, as being accompanied with a noise in the belly and flatulency ; and the course of the disease distinguished by slowness to passion, keenness in thinking, and that state of the simple solids, which requires a high force of stimulant operation to procure, and keep up a sufficient degree of excitement.

619. SINCE the state of the simple solids is a state given by nature, and not to be changed by art, and the only indication of cure left in the physician's power, is to fit a certain degree of excitement to that given state, which is exactly the case in this

disease; it follows, therefore, that the stimulus of food, drink, and others, should be employed in the cure of hypochondriasis. The patient should be kept cheerful, by being placed in agreeable company, and gay entertainments, by entering upon a journey, and amusing himself with the various scenes of nature and art through which he passes. He should ride, that, in guiding the horse, his mind may be more occupied. His studies, and every subject of his ordinary contemplation, should be often changed and varied. He should have generous wine given him, to relieve the symptoms of his stomach and intestines, and to raise his animal spirits. And if these should fail of success, the diffusible stimuli, as opiates, should have their turn for a time, for the purpose of striking a stroke at once. And their use again gradually laid aside, in proportion as the strength can now be supported by the more natural and accustomary stimulants. Darkness and bad air should be shunned; pure light, and all lively objects, should be sought after. No hypochondriac, even in a fit of delirium, should be provoked, but by every contrivance soothed (r).

(r) I have heard of an hypochondriac so provoked at his physicians, who maintained that nothing ailed him, that he, on the contrary, to carry his opinion of his disease to the utmost, at last took it into his head, that it

Of Dropsy.

620. DROPSY is an asthenia, commonly in the form of an anasarca, with a swelling in some viscus, which, for the most part, at least in the beginning, attacks some place in preference to others, and more than any other.

621. THE cause of dropsy, in so far as it respects the collection of water, is easily explicable upon this doctrine, but altogether inexplicable upon any other. For the universal debility, that is, laxity and atony, is chiefly predominant in the extreme red arteries, and the exhalants immediately continued from these, as well as in the commencements of the absorbent veins; and, of the same

had attained its utmost height, by depriving him of his life. He continued obstinately in the notion of his being dead, till a more sensible practitioner was called in to see him. This gentleman agreed that he was dead, but as he could not discern the particular cause of his death, he, therefore, proposed to open the body: In setting about which, he made such a clashing with a great apparatus of instruments, provided for the purpose he intended, that the patient was roused from his obstinate sullenness, and allowed, that this gentleman had come nearer to his case than any of the rest; but acknowledged, that he now found he had some remains of life.

kind of vessels, it is often urgent in a particular part, in preference to others.

622. As all the debilitating hurtful powers concur in producing this, as well as any other asthenia; so, those powers have the greatest influence in this case, which press most urgently upon the vascular system. Hence, as we see in the conversion of peripneumony into the dropsy of the chest, profuse bleeding, and a large draught of cold water, when the body is fatigued, over heated, and burned up with thirst, are the most powerful agents in bringing on this disease. The hurtful effect of the latter of which, in every case of debility, when its operation is followed by no stimulus, has been more than sufficiently explained above (*t*). Besides, in this case, when all the vessels are open, the water flowing to their most weak terminations, passing out by these, and being not all transmitted from the exhalants into the absorbents, is collected into every neighbouring cavity (*u*). And hence the commencement of the urgent symptom in this disease.

623. To this asthenia belong all the watery effusions, which do not arise from a local affection,

(*t*) See par. 117 to 124.

(*u*) See par. 59. 60. 61.

but depend on pure debility. And, therefore, if at any time any other form of asthenia, whether from wrong treatment, or other hurtful powers, in its progress terminates in this effusion; every such case should be held as a proper dropsy (\times); and it should be ever present to our recollection, that there are only two general diseases, and that the distinctions hitherto received are devoid of all solid foundation. Accordingly, both from other improprieties, and particularly from bleeding, epilepsy, palsy, the gout, terminate in real dropsy. Nay, the same is the termination of peripneumony itself, when it is either converted into indirect debility, from the debilitating plan of cure having been pushed to excess, or into direct debility, from having been left to itself, and the body not sufficiently debilitated. The affections, confined to parts, which are considered as the remote causes of dropsy, will be treated among the local diseases, to which they belong.

624. AFTER this explanation of the nature of dropsy, the cure of it, provided that it be a proper one, and early enough set about, ought by no means to be so much despaired of, as it should be

(\times) See par. 81.

when local affection, with a similar effusion, and the general disease, are blended together without distinction, and considered as one and the same (*y*). If long before the effusion, there was no internal complaint, if the disease rather came on suddenly, and in consequence of evident hurtful powers, and yields to the first part of the curative means, there is no reason to doubt of a cure.

625. BESIDES the general indication of cure for asthenia, that suited to this case must be particularly directed to the whole vascular system, and especially about their terminations, and the commencements of the absorbent veins. The remedies are also the usual ones; that is, diet, as nourishing and stimulant as possible; first in a fluid form, when the solid cannot be admitted upon account of the debility of the stomach; then also in a solid; and, together with both, strong drink, such as the best wine which can be got, fermented spirit, sometimes pure, sometimes diluted. If the disease does not yield to these, after their use has been continued for a proper length of time, recourse must be had to the diffusible forms. By this means, when the ef-

(*y*) Sometimes the predominant symptom rises to the degree of being above the power of the excitement, as in the tumour of schirrus, and the effusion here.

fusion has not yet attained to that high degree which constitutes a local affection, not to be altered by any state of the excitement, this *asthenia* can be as easily cured as any other.

626. BUT, when a great quantity of water has now got into some large cavity, it should immediately be removed by the catheter ; when that has been done, and the emptied cavity secured with as much care as possible, and the strength supported by wine, strong drink, and any stimulus more diffusible, we must return to the management mentioned a little above. And if it should likewise fail now, our judgment must be, that either the general disease has degenerated into a local, or that the affection has been local from the beginning.

Of Epilepsy.

627. EPILEPSY is an *asthenia* ; the distinguishing symptoms of which are, some heaviness of intellect, dullness in the exercise of the senses ; and then a very impaired state, or temporary extinction of the latter, accompanied with various convulsions over the body. Fits, consisting of such a concurrence of symptoms, usually return afterwards at uncertain

spaces of time, and each of them terminates in a foaming at the mouth.

628. As all the debilitating hurtful agents are productive of this disease ; so, the loss of the blood and other fluids, excess in venery, passions, such as fear, terror, assiduous and intense thinking in great geniuses ; a deficiency of that kind of stimulus in stupid persons, are particularly so (*z*). These powers which produce the first fit, more easily bring on after ones : And, besides them, certain unusual impressions upon senses, some of them disagreeable, some highly agreeable ; such as, the flavour of some foods, the smell of a rose, have the same tendency ; and certain poisons (*a*) are said to have the same effect.

629. But the appearance of symptoms is a thing full of fallacy, and, unless the nature of the hurtful powers producing them, and of the remedies removing them, be thoroughly understood, it is incomprehensible. To solve the present difficulty about poisons, and to settle the question, whether the symptoms belong to universal or local disease ;

(*z*) See above par. 134. 137. and the addition ; par. 142. and 139.

(*a*) See par. 20.

we must consider, whether the latter one, produced by a vitiated state of a part, suppose that part either the stomach or brain, such a vitiated state, as in some point of the lower extremities proves the cause of the aura epileptica; and whether this vitiated state resists the virtue of the remedies which perform their cure by changing the excitement; or whether all the symptoms are either relieved or removed by the change of excitement. If the former is the cause, the affection must be considered as local (*b*): if the latter be the truth, the disease must be held for a general one, and a true, but a great asthenia. Nor must we forget, that a great many symptoms of general diseases, from the same origin, are dissimilar; and many from different, nay, opposite causes, are similar; that many local symptoms have a great resemblance to those of general diseases, and that they sometimes, by a most false appearance, counterfeit epilepsy, sometimes apoplexy, sometimes certain other general diseases besides.

630. For the purpose of preventing this disease, we must both avoid other debilitating powers, and those which have the greatest power in producing it. The vessels should be filled by giving food

(*b*) See above, 224.

as nourishing, and as effectual in producing blood as possible; the indulgence in venery must be moderated, cheerfulness and tranquillity of mind must be favoured, an agreeable train of thinking must be found, and all the objects of the senses, which give them disturbance, guarded against; the strength must be fortified by recruiting exercise, by the Peruvian bark, if the approach of the fits can be perceived, and by wine, and the more diffusible stimuli. A length of sleep, that is, a medium betwixt too long and too short a continuance of it, should be kept up. Stimulant heat should be applied; and all excess of it, as well as cold, avoided (*c*). The purest air, such as that in the fields, which is free from moisture, should be sought after. The surface of the body should be excited by friction, and cleanliness, for the purpose of cherishing the organs of voluntary motion, which are most closely connected with the animal power in the brain.

631. THE same remedies, which radically cure the gout, also cure epilepsy, and precisely in the same manner (*d*).

(*c*) See par. 124. 127. 228. 277. 137. 130. 238. 239. 260.

(*d*) This paragraph is the answer to the question proposed in that which stands in the *Elementa*, answering to

Of Palsy.

632. Palsy is, an asthenia, in which, with the other proofs of the usual debility, often with some degree of apoplectic fit, commonly all on a sudden, the motion of some part of the body, and sometimes the sense of feeling, is impaired. When the fit is slight, and of short continuance, it terminates in health; but the consequence of a higher degree, and greater duration of it, is death.

the same number. That paragraph, therefore, is erased, and this put in its place. I had heard from some of my pupils, that they had been able, by their diffusible stimuli, to remove epileptic fits. But, in case of any mistake, I would not venture to mark the fact for certain, which I have now done from my own perfect conviction. A young man, lately married, had the most alarming fit of epilepsy that ever was: His case was thought beyond remedy; as an extreme one, however, he got from some person, the full of a tea-cup of tinctura Thebaica, up to a blue ring, a little below the brim. He got out of his fit some how or other, but was perfectly stupid and senseless for a fortnight. Upon his falling into another, I was sent for, and brought him about in twenty minutes, as I am told (for I did not wait), so completely, that he got out of bed, and ate a hearty meal of beef steaks. Many weeks after, by mismanaging himself, and neglecting directions given him, he fell into a slighter one, and was cured in the same way.

633. THE hurtful powers which usually produce epilepsy and apoplexy, also tend to produce palsy. And besides these, all the common debilitating powers which produce any asthenia, directly or indirectly; great commotion of the nervous system by means of too diffusible stimuli; more affecting the circumference of the body, where the organs of voluntary motion are chiefly seated, and the internal parts and the brain less; as is evident in ebriety, gluttony, and every sort of intemperance; likewise an indolent way of life, which is commonly connected with these hurtful powers, have all the same tendency.

634. WHEN the disease has once taken place, as it is kept up equally by directly and indirectly debilitating powers; so,

635. FOR the indication of cure, which is precisely the same as in epilepsy, as the energy of the cause operates more immediately upon the surface of the body; consequently, according to what was said upon the subject of epilepsy, the principal remedies are those which have the greatest power in invigorating the surface of the body: Such are, friction, gestation, that degree of exercise which the strength can bear, for the purpose of rousing, by

their powerful operation, the languid excitement in the fibres of the muscles ; likewise a proper degree of heat, of pure air, and, therefore, as much as possible, the open air ; lastly, as none of the powers endowed with stimulant virtue, by any means, should be omitted, in order that the excitement, which is of great consequence in every cure, be more equal and vigorous all over ; so, in that extreme debility which produces such an impotency of voluntary motion, as it is of the greatest consequence to make an impression upon the principal symptom ; we should, therefore, employ a great deal of an opiate (130. and 230.) the influence of which, upon the surface, is the most considerable of all other powers, and press the cure, till some commencement of returning motion be procured ; and then, without neglecting the assistance of any of the other stimuli, but using them all in concurrence or succession, for the sake of rendering their common effect more powerful and more equal, to eradicate the disease.

636. DEBILITATING and evacuant powers are to be avoided ; for this reason, that it is not vigour, it is not an over-proportion of blood, but a scantiness of the latter, and a deficiency of the former, that is the cause.

Of Apoplexy.

636. APOPLEXY is an *asthenia*, resembling the two just now mentioned, in its cause and cure, differing in the appearance of the symptoms, which makes no difference in the truth (*e*): In which, besides the symptoms in common to it with them and the other *astheniæ*, all of a sudden, sense, intellectual energy, and the voluntary motions, are impaired; the respiration remains, but with snoring; the pulse is weak, and the whole fit is finished with the appearance of a profound sleep (*f*).

638. THE heads of the patients are large, and not well formed, their necks short and thick. The disease arises from both direct and indirect debility, but chiefly from the latter. Of the indirect debilitating powers, the most powerful is the luxury of food, drink, and sloth, which, after its course of stimulating and filling the vessels is run, is truly debilitating, and productive of a penury of fluids: And, as each sort of debility is increased by the other, and consequently the indirect by the direct,

(*e*) See par. 81. 509.

(*f*) See par. 153. 200.

so that is remarkably the case in this disease. Hence the effect of the debilitating plan of cure is so pernicious in apoplexy, that it is received as a rule, that the third fit is not often, the fourth never, got the better of.

639. THE cause of epilepsy, palsy, and apoplexy, is the same with that of every asthenia; affecting the head less in palsy, excepting in the beginning and end, but greatly in the two others; and in all the three producing a disturbance in the organs of voluntary motion. This disturbance, whether the motion be destroyed or diminished, in convulsion seemingly increased, amounts to the same thing, and, as was formerly explained, depends upon debility (*g*).

640. THE same here, too, is the indication of cure; with that, which runs through this whole form of diseases, and the force of the remedies is especially, and as much as possible, to be directed to the parts most affected. To prevent, therefore, the fits, in every respect alarming and full of danger, we ought to recollect, how far indirect debility has a share in producing this disease, and how far the direct concurs with it; and also consider

(*g*) See par. 58. 230,

the operation of a greatly advanced age. All excessive stimulus, therefore, must be avoided in such a manner, that the body may be invigorated, and direct debility guarded against, the stimulant plan of cure should be set on foot with moderation and accuracy ; and, in the place of the forms of stimuli, which have, either from long or excessive use, lost their stimulant operation, according to the rule of nature, others, which the excitability, yet not worn out with respect to them, can receive, should be substituted ; that is, the kinds of food, of drink, and of diffusible stimuli, should be changed all round, and upon the failure of each lately used one, to return to those which have been long ago laid aside (*b*).

641. THE three diseases, of which we are treating, are commonly supposed to arise from a plethora, attacking the head, and proving hurtful by compression upon the brain. But, besides that plethora has no existence in any case where it has been supposed (*i*), at that extreme age, at which those diseases happen, or sometimes in epilepsy, when it affects weak and starved children, how can the blood be in over-pro-

(*b*) See par. 301.

(*i*) See par. 131. 134. 549. 555.

portion? Can penury of food, which alone is the matter which forms blood in the latter, and in the former a vigour long gone, create an over-proportion of blood, and not, on the contrary, a penury of it?

642. As plethora has then no share in inducing those diseases, so, neither is an effusion of blood or of serum (*k*) upon the brain to be accused of it. Nay, a similar effusion happens in every case of the vessels, from great debility, as well as in this case.

Of the Lock-Jaw.

643. THE lock-jaw is a less degree of tetanus, its spasm being confined to the lower jaw and the neighbouring parts. This is a rare affection, without others equally conspicuous; as being a formidable symptom of fevers and wounds. When the former of these happens, it will be treated of in fevers; when the latter, it will give occasion to an inquiry, whether it belongs to local or general disease.

(*k*) See par. 137. and the addition.

644. SINCE it never arises immediately after a wound is inflicted, but usually happens, either when the latter is healed up, or after a considerable interval of time ; the inference from that is, that it either arises from the violence and duration of the pain, which is always a cause of very much debility, or from that debility, which the usual antisthenic plan of cure produces, or from an unknown taint in the substance of the nervous system.

645. THAT it depends upon debility, we have reason to believe, from every sort of spasm always depending on debility (*l*) ; from tetanus, which is precisely the same affection, only differing in degree (*m*), having no other origin ; and, in fine, from the success of the stimulant plan of cure in this as well as all other spasms, and the want of success of the antisthenic, or debilitating evacuant one. All the other particulars regarding this subject shall be noticed under the next head of disease, tetanus.

(*l*) See par. 189. 111.

(*m*) See par. 228.

Of Tetanus.

646. TETANUS is an asthenia, and, therefore, always affecting persons under debility, whether direct or indirect; in which, sometimes with consciousness, sometimes not, sometimes with difficulty, sometimes with freedom of respiration, the whole body, or the neck and its neighbourhood only, are bent, sometimes forward, sometimes backward, and held fast by a rigid spasm.

647. TETANUS is but rarely the offspring of cold countries, as the northern parts of Europe; more frequently of the warm southern regions of that division of the world; but most frequently of the Torrid Zone. The rare case, such as that among us, is the sequel of a debility scarcely usual in other general diseases: On the contrary, it almost always arises from that unusual debility, which is occasioned by a lacerating wound, through which fractured bones are dashed, increasing the sum of that debility which existed before, or which happened to be induced in the course of the cure. To produce the more frequent case, or that most frequent one of all, which is quite common in the Torrid Zone, the most powerful of the debilitating powers, and a

very great many, if not all of them, concur. The most powerful of these is, that degree of heat, which is intolerable to persons engaged in exercise or labour (*n*), to whom almost only, and therefore to the slaves, it is hostile. Hence, even under the slightest corporeal motion, fatigue and sweat are produced (*o*), and from the sweat a scantiness of blood and other fluids. From all those arises a languor over the whole body, and, therefore, in the stomach (*p*): From the languor of the stomach there is a puny appetite; and food, which is another cause of penury of the fluids, is either not taken in, or thrown up again. All these affections, as well as that indolence, both in mind and body, which is inseparable from such a state of circumstances, are followed by the highest degree of debility over the whole body. And, as the most noxious power, the intense heat, distresses the head more than any other part, as well as the organs of voluntary motion, whether in the neighbourhood of the head, or more distant from it; that is the cause of the urgent symptom, the spasm, occupying the parts which have been mentioned.

(*n*) See par. 127, and the addition.

(*o*) See par. 115. 137. and addition.

(*p*) See par. 186. 194. to 198.

648. As tetanus is occasioned by all the debilitating powers, according to the different degrees in which they possess that effect, and, consequently, like every other asthenia, depends upon debility as its cause ; and, as all the astheniæ are removed by remedies, exciting the whole system in such a manner, as to exert the greatest influence possible upon the labouring part ; the same, accordingly, is the nature of tetanus, however little that disease has been understood, the same simplicity of nature is found in it : And if there be occasion in it for the very highest remedies, that circumstance shows, that the whole disease does not depend upon the spasm, and that the labouring muscles are not its whole seat, but that there is vast debility in every part, only greater in the muscles than in any other equal part, according to the law we have mentioned (*q*),

649. FROM what has been said, after tetanus has taken place, and upon account of the teeth being shut by the lock-jaw, there is neither access to the weaker and less powerful stimuli of food, drink, and such like, which are often sufficient for the cure of diseases of lesser debility, nor any sense in using

(*q*) See par. 49.

them ; we must, therefore, immediately have recourse to the most powerful, and the most diffusible, stimuli possible, and continue their use without regard to quantity, not even that of opium itself, till the whole tumult of the disease is allayed (*r*).

Of Intermittent Fevers.

650. PAROXYSMS, consisting of a cold, hot, and sweating fit, are a sort of phenomena which occur in every intermittent, and, in a certain proportion, in every remittent fever. They often come on in consequence of a certain taint received from neighbouring morasses, or from a similar state of a neighbouring soil ; but they also happen, and often too, after an application of cold only (*s*) ; at other times

(*r*) See par. 295. to 302.

(*s*) as in the vernal intermittents in Scotland. In the Merse, or county of Berwick, where I laboured three months under a tertian, that is, from the beginning of March to the beginning of June, and in the Carse of Gowrie, and some other places in that country, nothing is more common than the tertian ague happening at the time at which I was affected ; and nothing is more certain, than that cold and moisture are the chief powers inducing it. It is somewhat strange, that a man born in that country, if he would patch up a system of fevers,

after that of heat only (*t*), when the common asthenic hurtful powers accompany either (*u*): And they return, with a remarkable exacerbation, after a temporary solution of the disease, or an abatement of it; in the cold fit, exhibiting manifest debility; in the hot, counterfeiting a deceitful appearance of vigour; and scarcely ever observing any strict exactness in the time of their return (*κ*); but returning sooner in a higher, and later in a lower, degree of the disease; and not unfrequently, besides the remittent, also gradually assuming a continued form; and, on the contrary, sometimes without interference, oftener in consequence of an improper

should have overlooked a form of them, which occurred to his eye-sight every day, and borrowed his hypothetical course from a marsh miasma, supposed to be the produce of great heat and moisture, though he had only heard or read of the intermittents of warm countries.

(*t*) In the warm countries agues often occur, when it is easy to discern heat to be an hurtful power; but when moisture is much less prevalent, for that very reason that the heat is prevalent, than at other seasons when the disease does not occur.

(*u*) “*Utramque*” is corrected into “*utramvis*” in the Latin.

(*κ*) Dr Sydenham was content to count the periods by the day, which was even too particular; but nosology has refined the matter into the wonder of exactness to an hour.

method of cure, before the disease is ended, changing into quintans (*y*), septans (*z*), nonans (*a*), or into sextans, octons, and decans (*b*).

651. THE fever of this kind, which returns every fourth day, and is therefore called a quartan, is milder than that which receives the name of tertian, from its recurrence being on the third day, and the latter is milder than that which, from its return every day, is denominated quotidian. The disease, which degenerates into a remittent or continued form, is of a worse nature than that which is regular in its returns, or that which puts off fits, and protracts the intervals betwixt them. And, the form and type of each case being given, the whole set is both of more frequent recurrence, and of a more severe kind in hot, than cold, climates.

652. THAT this sort of fever depends upon debility throughout the cold fit, is proved by the symptoms, by the exciting hurtful powers, and by

(*y*) Where the fit does not return till the fifth day.

(*z*) Where its return is not till the seventh day.

(*a*) Where the intermission continues till the ninth day.

(*b*) That is, prolonging their intermission till the sixth, eighth, or tenth day.

the method of cure, whether successful, or the contrary.

653. THE whole disease, as well as every paroxysm, begins with a sense of cold, the greatest desire for a warm situation (*c*), with trembling, and that shaking motion, in which the whole body is lifted up from the bed (*d*), with paleness, dryness, and shrivelling of the skin, with the diminution of tumors, and drying up of ulcers which the patient may happen to have had before the arrival of the disease, with an impaired state of the intellectual faculty, a want of steadiness in its exertions, and sometimes delirium, with a dulness of sensation, languor of spirits, torpor of the voluntary motions, a listlessness of mind and body in all the functions; in fine, a manifest debility.

654. IF terror, horror, cucumbers, cold melons, famine, debauch in eating and drinking, food of difficult digestion, have been found, for certain, to have

(*c*) I remember yet, that it was the highest luxury for me, when the cold fit came on, to be put in bed, and covered under such a load of blankets (for the cold of sheets was intolerable) as would, at any other time, have oppressed me. I was then about eleven years of age.

(*d*) By authors and lecturers in Latin, absurdly called *rigor*.

a great effect in bringing back paroxysms, after a long intermission of them; if in cold situations, where cold is the principal hurtful power, it is the poor people, who are ill clothed, starved in their diet, and enfeebled by labour, who, in general, are only affected with disease; if in warm regions of the globe, those who have been most exposed to debilitating hurtful powers of all kinds, who, in preference to others, are seized with it (*f*); if in moist places, those who live well in their diet, and cheer themselves with their bottle, escape the disease (*g*), and water drinkers, and persons in a state of inanition from low living, peculiarly experience it: all these facts show, how far this disease is from depending upon heat and moisture alone; and prove, that it also arises from cold, and not from either alone, but also from all the usual hurtful powers, like every other asthenia.

655. FURTHER, -if every kind of evacuation, as

(*f*) See par. 647.

(*g*) as in Holland; where the Dutch students, who live not near so well as the English, are very liable to the disease, while the jolly-living English, who do not like the weak rhenish wines, and the weak ill-managed vin de Bourdeaux, which is a cheap dirty claret, almost never fall into the disease at Leyden, while the Dutch are perpetual victims to it as often as it is epidemic,

often as it has been tried, is found, without the possibility of a doubt, to be hurtful ; if no person, in his senses, has scarcely ever attempted bleeding (*b*) ; if, before the Peruvian, and some other barks of similar operation, were found out to act as remedies, a variety of strong drinks (*i*) were used with sufficient success ; and if it now also is found and demon-

(*b*) They have talked of taking a little blood in the spring intermittents ; but that was a theory of Dr Sydenham's, who divided the diseases of the whole year, into inflammatory and putrid ; and I do not find that that idea has ever been followed in practice. For though they follow him most servilely in most respects, especially where he is wrong, their vanity, that they may now and then seem to strike out something from themselves, disposes them to differ from him in others, especially where he is right, as in the rejection of purging in some sthenic diseases (137).

(*i*) as ale, wort, wine, spirits, strong punch. Riverius followed this plan ; and I remember it was a custom among the common people to cure themselves by getting tipsy. But I was allowed neither the one method of cure, nor the other. The authority of Dr Stahl and Boerhaave, had thrown the bark into disrepute in Britain : And my mother, " who trusted in God, and not in physicians," left me to the course of desires and aversions, which were chiefly to avoid cold, and anxiously seek for heat. She kept me upon a vegetable diet in the intermissions, which I even then did not much like. It was the kindly warmth of summer, which then set in early, that had the chief effect in gradually finishing that cure.

strated in fact, that the diffusible stimuli are by far more effectual than any bark ; nay, that the bark often fails, while they are perfectly effectual in the re-establishment of health ; from this sort of argument and certainty in point of fact, we derive the most solid conviction, that there is nothing in this disease different from other astheniæ, but that it perfectly agrees with them in the exciting hurtful powers, in the cause, and in the cure. And, if it differs in the appearance of the symptoms, that shows no difference of nature, and not even any thing unusual ; as all the astheniæ which have been mentioned, however much they have been proved to be the same (*k*), differ notwithstanding, in a similar manner, from each other, and symptoms lead not to truth, give no real information. For, though precisely the same sound functions flow from the same state of perfect health ; yet, when the latter is so changed, that the excitement is either increased or diminished, the functions are changed from the standard into every sort of appearance, in such sort, however, that they point out no difference in the cause, as has been commonly believed, and not always even a difference of degree (*l*).

(*k*) See par. 71. and the addition. 81. 629.

(*l*) See par. 504. 507.

656. ACCORDINGLY, the following demonstrated facts of spasm, convulsion, tremor, inflammation from weakness, deficiency of menstruation (*m*), bleeding discharges (*n*), loss of appetite, thirst, nausea, vomiting, diarrhæa with pain, diarrhæa without pain, and all the other asthenic affections (*o*), arising from one and the same cause, and being removed by one and the same operation of the remedies (*p*), and, not even in their morbid state, expressing degrees of debility in such a manner, as that it can be thought proper to take any order of arrangement from that mark; all these serve to confirm the observation just now made, and, by their analogy, to demonstrate, that the fevers also are distinguished by intervals of freedom from febrile state, sometimes greater, sometimes scarcely perceivable, in common with what happens to many other diseases, not from any peculiarity in the cause, but from a variation in its force. If fevers sometimes intermit their febrile impulse, sometimes exert it more remissly, and sometimes, by perform-

(*m*) See par. 545. and the following paragraph.

(*n*) See par. 548.

(*o*) See par. 176. to 195. and to 197.

(*p*) See par. 222. 556. 561. 571. 573. 574. to 695. and from that to 698. Look also carefully over the whole of Chap. IV. Part II.

ing the latter imperceptibly, go on almost in a continued career (*q*); do they, in that respect, differ from the gout (*r*), which never goes on with an equal force, but abates from time to time; and even, when it has interposed an interval of health, returns with more severity than ever? Or do they differ from asthma, as well as many other diseases, in all which the same thing precisely happens? And, what is more usual, in indigestion, and often violent vomiting (*s*), accompanied with a rage of other symptoms, than the intervention of intervals of the

(*q*) See 650.

(*r*) When the gout in the old way, is left to patience and flannel, and low diet and watery drink, it shews both remissions and considerable intermissions. I have been often mortified at finding, in consequence of walking a little too freely, when I thought the fit was gone, a more violent return than the first part had been; when I had not yet attained the full knowledge of the nature and management of that disease. Which is a circumstance, that every podagric, who is still treated in the old way, can bear witness to. Dr Sydenham fell a victim to his ignorance of its nature.

(*s*) A gentleman in Scotland came to dine with his brother, who lived with me and my family, in a house in the neighbourhood of Edinburgh. He eat and drank so sparingly, that I predicted, from a knowledge I had of his manner of living, which was an excess of temperance and abstemiousness to a faulty degree, that if he did not indulge a little more in these respects, he would soon fall

greatest relief? The same is the nature of the chin-cough (*t*), the same is that of the asthenic cough (*v*). In fine, where is there one of all the sthenic, or all the asthenic diseases, the morbid career of which continues the same from beginning

into a disease of debility. The prediction was verified in a few days; when his brother having occasion to go to town, found him, in the intervals of a violence of vomiting, making his testament. By a good dose of the diffusible stimulus, he removed the whole disease at once, and enabled him, with the additional help of some good sound port and genuine Madeira, in a few minutes to eat heartily of beef steaks. Before his brother's arrival, he had been treated in the usual evacuant, and, as they call it, the antiphlogistic way. Upon the return of his medical friends, a glister was prescribed, which threw him back into his disease, from which, with the same ease, and in the same short space of time, he was extricated upon his brother's return to his post. This young gentleman, from that beginning, like many other of my pupils, is now a most respectable man in his profession. Some time after that, he performed the greatest cure, which ever happened since the first annals of medicine. In a very dirty ship, the Dutton, which was going to the East Indies, he stemmed in the latitude of Rio Janeiro, a fever that was carrying off numbers every day, losing not one, as can be attested by the ship's books, for no less than five weeks: his name is Dr Campbell.

(*t*) See par. 579.

(*v*) And from 587. to 597.

to end? There is none (*u*). For, as life, in all its states (*x*), is always in proportion to the action of the exciting powers, upon the excitability, and both predisposition to diseases, and diseases themselves, supervene in proportion to its being greater or less than the proper degree; so the course of diseases follows the same rule; and, according to the variation of the degree of that action, is one while increased, another while diminished, another while exhibits a temporary eruption; just like what happens in this sort of fevers.

(*u*) All this confirms, and not only the point at present meant to be settled, which is, that the distinctions which physicians have made about the differences of fevers, are without all foundation, and that they are all the same, with no other difference, but in degree, and that, unless in that respect, they do not differ from other diseases of the same form; but it likewise adds additional weight to our fundamental proposition, that we are nothing in ourselves, but according to the powers acting on us. Many circumstances in the course of diseases, that escape the observation both of patients and physicians, are of hourly and momentary occurrence, and sufficient, when their importance is weighed according to the principles of this doctrine, to account for the variations in the progress of diseases. We shall by and by see, that the circumstance of heat, from the gratification of indulging in which, the patient is not to be turned aside by any advice, is, with its consequences upon the whole system, sufficient to account for the gradual conversion of the cold into the hot, and the hot into the sweating, stages.

(*x*) See par. 9.

657. THE cause of them is the common one of all *astheniæ*, whether febrile or not; but under such direction and application to the system, that, after an interval of some hours, all their morbid energy departs intirely, or in some degree. The reason of which is, that the exciting hurtful powers, in the same proportion, are either removed, or more gentle in their operation; in one word, the excitement is increased for the time. The variation of types is not owing to a matter, subject to the same variation: For, if that were the case, how could the same case run through all the forms, sometimes of intermission, sometimes of remission, and at other times of nearly going on with a continued movement, and the contrary? Is the matter, which is supposed to produce each form, in order to produce another form, changed into that matter, which is supposed necessary to the latter (*y*)? Is the vapour, or, as they call it, the efflu-
vium, proceeding from animals, which is supposed to produce any typhus, or continued fever, and,

(*y*) The ancients supposed, that every type arose from a matter suited to produce it. Now, suppose a quotidian type to depend upon any given matter, and a tertian upon any other, different from that; when either type is changed into the other, are we to suppose that the matter is also changed, and so forth of the rest?

therefore, the Egyptian one, when this is changed into an intermittent, or remittent nature, also, together with the change of type, changed into a marsh miasma, or defilement arising from morasses, which is supposed to produce that form of fever? Or rather does the matter, which at first produced each type, still continue the same, and become the cause of another form? If any person should fix upon the latter as being the truth, how should the same cause produce different effects? But, if he incline to adopt the former supposition, what proof is there, which can be admitted upon any principle of reasoning, that, as often as the form of the fever changes, so often its cause, the matter, is also changed. It has been already proved, that marsh miasmata, or defilement, are not the cause (z). And it shall be by and by evinced, that the animal effluvium, or vapour, arising from the body, when affected with a continued fever, is not: Nay, it has been proved, by the most solid arguments, that neither is any other matter taken into the body, either in this or any case, that which produces the disease, and that the change of excitement alone is the universal source of all general diseases (a).

(z) See par. 653. 654. 655.

(a) See the paragraphs 22. 23. 62. and addition 69. 70. 72. 73. and 88.

659. To inquire into the return of fits; it is not peculiar to this form of fevers, to have a return of the general affection after its temporary solution; the same thing happens to the gout, as often as a return of the disease again succeeds to a return of health (*b*), and for the same reason (*c*): For, as those diseases are repelled by invigorating means, so, they are brought back by the debilitating powers, which were their first cause. Accordingly, when the disease is left to itself, when it is treated by a debilitating plan of cure, it perseveres in returning; when it is treated with Peruvian bark, and, still more certainly, by the forms of wine and diffusible stimuli, and when that mode of cure is persisted in, till the strength is quite confirmed, it never returns.

660. THE tertian vernal fevers of Scotland go off without medicines, in process of time, first in consequence of the heat of the bed, and then, as the summer sets in, by basking in the rays of the sun, and by a moderate use of food and strong drink, their duration commonly not exceeding the space of three months. In all the southern regions, and even in England, the Peruvian bark, when the

(*b*) See par. 656.

(*c*) See par. 657.

whole cure is entrusted to it, often fails, and they are not removed but by very diffusible stimuli (*d*).

661. THE debility during the cold stage is the greatest, that of the hot less, and that of the sweat-

(*d*) Dr Wainman, as it was said before, found that to be the case in the fens of Lincolnshire. From which we may learn how little dependence is to be had on the facts in medicine, as they are delivered from desks or in books; from both which we have always been taught to believe, that the Peruvian bark was a catholicon in intermittent fevers. But, if it fails in the cure of the mild state of that disease in this country, what must we think of its efficacy in the malignant intermittents and remittents of the warm countries? And, if that medicine, with its universal high character, shall turn out next to an imposition, what are we to think of testimonies in favour of any thing? One of the ways of administering the bark, is in strong wine or spirit, and it can hardly be doubted, but in that compound form it may have been of service. But where shall we find a panegyrist on the bark, who will make any allowance for the powerful medicine conjoined with it? They talk of it as a vehicle, without allowing it any other credit. In the same manner, at all times, have many powers of great operation been overlooked in the accounts given us of remedies, and the merit of the cure imputed to the most inert. I have most generally found an analogy betwixt the remedies, that are, in reality, powerful, and our ordinary supports of health. The wines and strong drinks are certainly a part of diet with most people, and so is opium among the Turks. But what analogy can be found betwixt the same ordinary supports of life, the same durable and natural stimuli, and the bark of a tree, whether

ing stage, which ends in health for the time, is the least of all. Hence, in a gentle degree of the disease, as cold is the most hurtful power, the consequence is, that its effect is gradually taken off by the agreeable heat of the bed or of the sun, and the strength thereby gradually drawn forth. The heart and arteries, gradually excited by the same heat, acquire vigour, and, at last, excited in their perspiratory terminations by the same stimulus, the most hurtful symptom being thereby removed, they restore the hot fit, and afterwards carry on the same process to the breaking out of sweat.

662. WHEN the force of the disease is greater, these powers are ineffectual; and, unless the most powerful remedies are applied, the disease, instead of producing intermissions, rushes head-long into the remittent state only, or even into those very obscure remissions, which give the appearance of a continued disease.

663. AND since, in every case of disease of any energy, the disease returns; for this reason, that

brought from South America, or growing among ourselves? I will not pretend to say, that the bark is devoid of all virtue; but I must have greater proofs of its power over disease than I have yet met with, before I can retract much of what I have said.

either the lesser force, by which it is kept up, is not stopped by a lesser force of remedies, or the greater force of the former by a greater force of the latter (*e*); the remedies, therefore, should be given both before the cold fit, and during it, as also through the whole course of the intermission to the next paroxysm, and they should be continued even through this, and after it is over. Lastly, like the practice in every other cure of asthenic diseases, we should gradually recede from the use of the highest stimuli, in proportion as the body can now be supported by the lesser and more natural (*f*).

Of the severe Dysentery.

664. THE severe dysentery, or bloody-flux, is an asthenia; in which, besides the symptoms in common to that whole form of diseases, so often now repeated, there are pains in the intestines, gripes, innumerable dejections, chiefly mucous, sometimes bloody, for the most part without the natural matter which passes that way, all which happen often after contagion has been applied.

(*e*) For the curative force must be always accommodated to the morbidic, or cause of the disease. See above 92. 109.

(*f*) See par. 105. and 107.

Of the severe Cholera.

665. THE severe cholera adds to the common symptoms of every asthenia, those of vomiting and purging alternating with great violence, and, for the most part, consisting of bilious matter.

Of Synochus.

666. SYNOCHUS is a very mild typhus, and such as chiefly happens in cold countries and cold seasons; in the beginning deceiving physicians by a certain resemblance to synocha, but a counterfeit one.

Of the simple Typhus or Nervous Fever.

667. THE simple typhus, or nervous fever, is such a synochus, as appears in warm countries or seasons, but somewhat more severe, and yet sufficiently simple.

Of the Cynanche Gangrænosa.

668. The gangrenous cynanche is a typhus, a little more severe than the simple typhus, or nervous fever, with an eruption upon the skin, and a red tumid inflammation of the throat, and with mucous

crusts of a whitish colour, and concealing ulcers below them. The end of the angina, formerly mentioned (g), equals or exceeds the violence of this disease.

Of the confluent Small-pox.

669. THE confluent small-pox is a typhus chiefly depending upon indirect debility. It is preceded by a great eruption of the distinct kind, and an universal crust of local inflammation over the whole body ; which, by their local and violent stimulus, convert the sthenic into the asthenic diathesis, and the inflammatory affection into a gangrenous one. Its cure is to be conducted upon the stimulant or antisthenic plan, but in such a way, however, as is suitable to indirect debility.

Of the pestilential Typhus, the jail, putrid, or petechial Fever, and the Plague.

670. THE pestilential typhus, or the jail, putrid, and petechial fever, is an asthenic disease of the highest debility, scarce excepting the plague itself ; in which the surface of the body is first dry, pale, hot, shrivelled ; then, chiefly towards the end, moist, diversified with spots, colliquative sweats,

(g) See par. 212. 214.

and vibices, or long strokes, like those laid on by a whip, and wasted with colliquative diarrhæa ; in which the stomach is affected with want of appetite, loathing of food, nausea, often with vomiting ; in which the belly is first boundish, and then, as it has been said, subject to colliquative evacuation ; in which the intellectual function is first impaired, then becomes incoherent, afterwards delirious, and that often in the highest degree ; in which the spirits are dejected and wasted with sadness and melancholy ; in which the voluntary motions are early impaired, and then so destroyed, that the patient cannot be supported in his posture in bed by his own muscles, or prevented from slipping down, from time to time, from the upper to the lower part, and the senses are either blunted, or preternaturally acute. In fine, the urine, the feces, the breath, and all the excrementitious discharges, have a singularly foetid smell.

671. The plague begins, holds on in its course, and ends with similar symptoms : To which, however, carbuncles, buboes, and anthraces, or fiery sores, are added. These are most frequent in the plague, but not so confined to it, as to be excluded from the pestilential fever (*g*).

(*g*) See par. 219.

672. CONTAGIOUS matter sometimes accompanies typhus, always the plague : The former is of a common nature, or such as is liable to happen in any part of the globe ; the latter is thought peculiar to the eastern part of Europe, and the western of Asia, possessed by the Turks, called the Levant.

673. WITH respect to the contagious matter of typhus ; the corruption of the fluids is by no means to be imputed to it (*b*), nor is heat so much to be blamed ; for cold has an equal power in producing that effect as heat (*i*), as has also every thing, as well as heat, which either directly, like cold, or indirectly like it, debilitates (*k*). Nay, the emptiness of the vessels, from want of food, or from the incapability of the digestive organs to take it in and assimilate it, as also that debility which is induced by melancholy and grief, though, in these cases, no matter at all is present, admit of the same application (*l*). By means of that debility in the extreme

(*b*) See above, par. 115. 122. 236. and the addition I.

(*i*) Ibid. and 261.

(*k*) See again, par. 236. and the the addition at 1.

(*l*) These words from “Nay” are an addition to the *Elementa* ; the words, in the original, corresponding to them, being “Immo vasorum, ei cibis negatis, vel adsumi digerique non potibus, inanitas, item a tristitia et mæ-

vessels, internally, as well as externally, and, therefore, especially in those of the alimentary canal and in the perspiratory vessels, the fluids stagnate ; and, by stagnating under the heat of the body, degenerate into that foreign quality, which, in a more extensive sense, is called corruption, but, in a more uncertain one, putrefaction (*m*).

674. As the cause of all these diseases is the same with that of diseases not febrile, to wit, debility ; differing only in this, that it is the greatest

“ rore, ubi materia nulla subest, inducta debilitas, eodem
“ pertinent.”

(*m*) There are three states or qualities produced in fluids by as many different fermentations, the saccharine, acid, or putrefactive. To one or other of those we are apt to refer every state of corruption in our fluids ; but they are liable to degeneracies, which do not exactly correspond to any of those : And, as we are not yet acquainted with any of those deviations from the natural state, it is safer to use the general term corruption. Even the word *acrimony* is too general, as we can by no means pretend to say, that perfect blandness is the natural and healthy state of our fluids : Nay, the different uses and subserviency to the functions, seem to require a considerable deviation from blandness ; the urine, the perspirable fluid, the bile, and others, being intended, by a certain poignancy, to answer certain purposes. These, compared to certain blander fluids, may be said to be acrid ; while compared to their state in morbid degeneracy, they may be called bland, and the latter acrid.

debility compatible with life, and not long compatible with it ; so

675. The indication also of cure is the same as that of the other astheniæ, but must be conducted with a good deal of more attention than is necessary in them, upon account of their much greater mildness (*n*). It is, then, debility alone, that is to be regarded in the cure ; and stimulant or antisthenic remedies alone, that are to be administered. Nor is there occasion for any distinction in the method of cure, but what direct or indirect debility requires (*o*).

676. THE indirectly debilitating powers, are the violent and local stimulus of the eruption in the confluent small-pox (*p*), so often inducing prostra-

(*n*) Fevers will require many more visits from the physician than are commonly either bestowed or required, and often a good deal of watching. While this is more generally the case in fevers, at least, in the high degree in which these fevers exist, at the same time, they are not the only ones that require such strict attention ; as every disease, when it has attained the same degree of debility, endangering life, will claim the same circumspection and vigilance from the judicious and conscientious physician.

(*o*) See par. 103. 107.

(*p*) See par. 175. 215. 216. 217. 218.

tion of strength, and drunkenness (*q*), heat (*r*), or long continued luxury (*s*). To these hurtful powers, thus indirectly debilitating, all the others may more or less be added (*t*).

677. AND, as it never happens, that either direct or indirect debility alone proves hurtful, hence we have a third case given, where we have to combat both sorts of debility (*u*).

(*q*) See par. 130. and addition.

(*r*) See par. 115.

(*s*) See above, par. 127. and addition.

(*t*) Look for them in Part I. Chap. I.

(*u*) Suppose any direct debility has occasioned a disease, when that is established, the excitability is so morbidly accumulated, that the slightest exertion of any exciting power becomes too much for it : which immediately constitutes an admixture of indirect debility. The stimulus of corporeal motion, which is a great and rough indirectly debilitating power, is often too long continued, after a typhus fever has begun its insidious attack upon the habit ; and hence, the after-part of the disease becomes more severe and dangerous. It is also to the same cause that we owe the propriety of excluding light and sound, when they prove causes of irritation, their stimulus, though slight, being too strong for the accumulated excitability. The guarding against gusts of passion and emotion, as well as mental exertion, is all upon the same principle. When a person falls into a fever from excessive labour and low diet at the same time, that is an instance of a mixture of debility from the beginning. Again, when any disease, chiefly of indirect debility, is treated by bleeding, other evacu-

678. The directly debilitating powers are known, to wit, cold (*x*), low diet, (*y*), bleeding, and other evacuations (*z*), rest of body and mind, and want of passion and emotion (*a*), and impure air (*b*).

ations and starving, that is an instance of a superinducement of direct upon indirect debility. A judicious practitioner, and who prescribes according to the rules which arise from a near acquaintance with the operations of the inanimate part of matter upon living systems, will find plenty of scope for the exercise of his judgment in these and many other niceties : And he will find, that the Brunonian doctrine, as it is now nick-named by those who know it not, is not a doctrine to be practised without knowledge, without judgment, and without sense ; but that it requires every part of knowledge requisite to throw light upon so extensive a subject, as that of the science of life over all nature, and all the judgment and good sense of the soundest understanding to carry it into application upon many occasions of nicety and difficulty. The trash which has hitherto too often passed for knowledge, is to be acknowledged to be not only useless, but hurtful. But the true knowledge of nature must be always elegant, always satisfactory, always useful. It is to be hoped the day is not far distant, when this doctrine will change its present appellation, into that of the doctrine of Nature, over the living part of her productions ; comprehending not only the morbid but healthy phenomena, and the distinctions between the living and dead state.

(*x*) See par. 117.

(*y*) See par. 128.

(*z*) See par. 134. 137. and the addition.

(*a*) See par. 137. and addition, and 139. and 142.

(*b*) See par. 146. Compare the whole with Part II. Chap. X. all from 290. to 312. and from that to par. 315.

679. As both those sets of powers act by debilitating ; be, at the same time, on your guard against believing, that some of them are septic, and prove hurtful by fermentation, and are to be cured by antiseptics, or powers which resist putrefaction ; and that, among the former, heat is to be reckoned ; among the latter, cold wine, the Peruvian bark, and acids (*c*).

680. IN the gentle cases, as in the agues of cold places, and especially the vernal agues (*d*), and likewise in synochus, in the simple typhus, and in the plague itself, when mild ; scarce any stronger stimulus than wine is required ; and the rest of the cure is to be conducted according to the directions so often now laid down in the mild asthenic diseases.

681. IN the most severe fevers, such as the remittent (*e*), in the warmer regions of the earth, and in the Torrid Zone, and in the severe typhus, when it is pestilential, in the very violent dysentery and cholera of the same places, and in the most violent plague itself (*e*), the cause of all which af-

(*c*) See par. 673. and the addition.

(*d*) See par. 650. 654. 660.

(*e*) See par. 650. 660. 654. 665.

fections is, in general, direct debility ; or, in gentler cases of the same disease at first, and which have now acquired a great deal of virulence in their progress from the neglect of the proper, or the use of an improper plan of cure ; we ought immediately to begin with the highest diffusible stimuli, such as opium, volatile alkali, musk, and ether, in small doses, but often repeated (*f*) ; and afterwards, when the strength is restored, and the force of the stomach confirmed by their use, to proceed to the use of food, drink, gestation, pure air, cheerfulness, and, last of all, to the usual offices and occupations of life.

682. WHEN indirect debility has had more concern in the case, as in agues, or more continued fevers, occasioned by drunkenness, and in the confluent small-pox ; the same remedies are to be employed, but in an inverted proportion of dose. We should, consequently, set out here in the cure with the largest doses, and which are next in quantity to that degree of stimulus which produced the disease (*g*) ; then recourse should be had to lesser

(*f*) See par. 41. 43. 113. 660. to 664.

(*g*) This may be exemplified by the treatment of a person the next and second day after he has been hurt by drinking. His excitability has been worn out by an un-

stimuli, and a greater number of them, till, as was said just now (*b*), the strength can be supported by the customary and natural stimuli (*i*).

usually strong stimulus, the effect of the first night's sleep is to allow it to accumulate again. In this state, much exercise fatigues, for want of excitement to enable it to be borne: Fluid nourishment is commonly used, but it is not strong enough to waste the redundance of excitability, and bring the patient back to his healthy excitement. The dram drinkers know the remedy, but they know not its bounds. They have recourse to a glass of strong spirit, and they would be right if they stopped at one, two, or a very few, according to the quantity which their former habit may render necessary, and take no more than what gave them an appetite for solid nourishing animal food; which, whatever the quantity which is required to produce it be, is the best general rule: But they go on, and every day till that of their death, which soon arrives, renew the disease. The rule is to take a little of what proved hurtful, till a return of appetite comes on. After eating a little, a walk or a ride will add more stimulus. The air, in which the exercise or gestation is performed, will furnish another. In that way, more strength will be acquired, in proportion as a greater number of stimuli have wasted more excitability, and with more equality. A second day's management, by applying the stimuli in still a lesser degree, will commonly remove all the complaints. When a habit of hard thinking has brought on, as it always will, sooner or later, a very bad and confirmed disease; if the excitability is nearly worn out, and what remains is very unequal, as having been produced chiefly by an alternation betwixt one stimulus acting with partial ex-

683. To give some estimate of the dose in both cases (*k*); in direct debility, where the redundancy of excitability does not, for the time, admit of much stimulus (*l*), ten or twelve drops of lauda-

cess and sleep, either imperfectly removing the excess, or by its length superadding direct to the indirect debility, which the drink occasions; the patient should have somewhat a lesser quantity, than that which at any time hurts him; then the next day still less; and so on, till very little will serve him, and he should add all the other stimuli in proportion as he diminishes the morbid one.

(*b*) See par. 681.

(*i*) See par. 308. to 312.

(*k*) See par. 681. to 682.

(*l*) The abundant excitability of an infant cannot be reduced at once to that wasted degree, in which the strength of an adult consists; it must be by the gradual application of what it can bear always for the present time which can be brought about; and, therefore, not sooner than a space of time, equal to half the individual's given period of existence. In a similar manner, an excitability which has been accumulated from deficiency of stimuli for a number of weeks or months, will require a space of time, somewhat proportioned to that, to wear it out in the manner most suitable to restore the lost vigour. Some health will be sooner brought about, but the effectuating of perfect health must be a work of time. Again, the direct debility of a few days will be easily removed in a few days. In fevers, and every case of high debility, the accumulation of excitability, for want of stimulant power to produce excitement, must be estimated by the number of stimuli which have been withheld, as well as the degree

num, given every quarter of an hour, till the patient, if, as is usually the case in such a high degree

of force of each of them. In a fever, then, the stimulus of exercise, of the open air, of conversation, of diversion of every kind, of an agreeable flow of spirits, of a pleasant train of thinking, of light and sound in a great measure, as well as of the exercise of all the other senses, and particularly the stimulus of a due quantity of blood, and other fluids, and most especially that of nourishing food, and, at least upon the common plan of practice, that of wine and exhilarating drink, all these are withheld; and, therefore, for want of them, the diminution of excitement must both be great and unequal. What, then, is required as to the idea of the cure? Since most of those, which are the ordinary stimuli, by which the ordinary health is supported, cannot be applied, the proper idea is to look out for a power in nature, which can, as nearly as possible, supply both the degree and equality of stimulant operation which is wanted. Such a power we find in the few diffusible stimuli, and particularly in opium (See par. 130. and the additions). Any of those act powerfully on the stomach, and diffuse proportional excitement over the system. So soon and effectually do they pervade it, and act with the most powerful effect upon the surface, that it is often an object of attention in the practice to think of means to prevent it from going too far. By the blessed use of those remedies, the excitement of the stomach is restored, so that with a return of appetite, food can be taken in, and digested, in so far as the powers of that organ go; which are confined chiefly to the first part of digestion, or what is called the first concoction. Next the excitement is restored in the other digestive organs, in the duodenum, in

of debility, he has wanted sleep long (*m*), falls into it. After sleep, when now some vigour is ac-

the biliary vessels, the pancreatic duct, in the lacteal vessels, through their whole course, from the intestines to their common receptacle, as all the vessels which return lymph from every part of the body, in the veins betwixt the thoracic duct and the heart, in all the cavities of the latter, in all the red arteries, in the colourless terminations of all these, whether exhalant or glandular, and whether only simply separating, or also changing, the property of the fluid they secrete, in all the internal cavities of the body, in the commencing extremities of the absorbent vessels, and in their progress through their lymphatic trunks to the receptacle in common to them with the lacteals, which are a part of their number, in the thoracic duct again; as also from that to the heart, and from the heart to the extremities of the arteries. Lastly, the influence of excitement is extended to these terminations of the arterial system, whether exhalant or glandular, which perform the several functions of excrementitious secretion and excretion, by which every portion of fluids, now become useless, or, if they were retained, hurtful to the system, are thrown out by their several emunctories. When, by the use of the diffusible stimuli, the stomach, and all the organs can perform their respective functions, the natural stimuli begin to be restored; the stomach, the intestines, the lacteals and blood vessels, and all the other vessels, are gradually filled with their respective fluids; the muscles on the surface, and the muscular fibres recover their tone and density; the brain recovers its vigour; heat and air can be now restored to the surface; exercise can now add its useful stimulus; and all the functions return

quired, both by that and the medicine, and now some of the excessive excitability is worn off, a double quantity of the diffusible stimulus should be added, and, in that way, gradually increased, till the healthy state can now be supported by stimuli lesser in degree, greater in number, and more natural (*n*).

684. IN indirect debility, 150 drops should forthwith be thrown in; and then the super-addition to be made should be less and less, till we arrive at the boundary just now mentioned (*o*). Both the measures which are recommended (*p*), are, in general, applicable to adults; but less will suffice at an early or late age. Nay, the rule further varies

to their usual capability of being acted upon by the usual and ordinary exciting powers.

(*m*) Want of sleep is an indirectly debilitating power; and, in this weakened state of the system, in this redundancy of excitability, where every exciting power is liable to be too much for the excitability, the want of sleep, by not allowing this partial waste of excitability to be repaired, is the occasion of so much more indirect debility being added to the direct; and hence, the sum total of debility is increased. The effect of sleep, in removing this partial indirect debility, becomes so far an invigorating power.

(*n*) See above, par. 103. and 107.

(*o*) See par. 683.

(*p*) in par. 683. and this.

according to the habit, the way of life, the nature of the place, and the peculiarities of the patient (*q*).

685. AND since the use of the diffusible stimuli only succeeds, when life cannot be preserved by the usual and more congruous to nature, and a due quantity of blood, and other stimuli, soon become sufficient to finish the healthy state ; we should, on that account, even from the beginning, immediately give animal food, if not in a solid form, in which it

(*q*) When the habit is delicate, the patient's way of life moderate as to the use of the stimuli, the place cold, or both cold and moist, and the patient easily affected with stimuli of all kinds ; in all these cases, the rule, which common sense prescribes, is to diminish the dose of the diffusible. A lady in Edinburgh, who had borne and nursed many children, had lived exceedingly moderately, had been, and still was, very assiduous in the management of her family affairs, and usually stimulated with little air out of her own house, fell into a colic, and, by the evacuant and starving plan, had been kept in it for a full month, till the urgent symptom of vomiting required further assistance. When I came, I first retarded the vomiting by a glass of whisky : And, by two more, with no other help but that of a mixture containing 30 drops of the Thebaic tincture, which the surgeon had been administering in miserable small portions, in three hours removed the whole disease. As I have said, somewhere before, the disease, from her neglect in fulfilling directions, had very nigh returned next day ; but another glass repelled it.

can neither be taken nor digested, at least in a fluid form, in that of soups ; which should be alternated with all the doses of the diffusible stimulus : Then, in a gradual way, proportioned to the return of vigour, first a very little of something solid, and afterwards more and more, should be thrown in, and the other stimuli, each at its proper time, brought into play, till the whole cure terminate in the management commonly observed in good health, where there is less occasion for medical injunctions.

686. WHEN the affection is more a mixture of both sorts of debility, these proportions of the doses must be blended together.

687. CONTAGION, which either adds nothing to the effect of the usual hurtful powers, or proves hurtful by the same operation by which they are so, is not otherwise to be regarded, than that time be allowed for its passing out by the pores, together with the perspiratory fluid, and, therefore, the perspiration be properly supported ; which, as it is affected by stimulating, is no addition to the general indication (*r*).

(*r*) See par. 88. 98.

688. LASTLY, the corruption of the fluids in the extreme vessels, must be obviated (s), not by means which, by a direct operation, remove it, but by the powers which act upon the excitement of the solids, and which increase excitement over the whole body, and, therefore, among other parts, upon the labouring vessels.

689. HAVING now run over the whole scale of decreasing exciting power from peripneumony to the plague, and from death by indirect, to death by direct, debility ; and having so executed the work, as to present the public with a new science, if not finished off in an elaborate, elegant, and highly polished manner, at least marked in outlines, and, like a rough statue, to be polished afterwards, in some measure fashioned in all its limbs, and embracing an intire plan of a work, connected in all its parts ; we must next pass over to the consideration of local diseases.

(s) See 236. addition at 1. and 274.

PART V.

LOCAL DISEASES.

CHAP. I.

Of Local Diseases.

690. LOCAL diseases (*a*) are divided, according to an order of nature, into five parts; the first of which consists of organic affections, where no disease over the whole system arises, none but in the hurt part. This is a sort of affection, which happens in parts less sensible, according to common language, or more devoid of excitability.

(*a*) See par. 5. 6. 7.

691. THE second part, likewise made up of organic affections, occurs in parts of the system, whether internal or external, which are very sensible, endued with a great deal of excitability (*b*); where the effect of the local affection is propagated over the whole body, over the whole nervous system, and where a very great many symptoms arise, similar to those which are peculiar to universal diseases.

692. THE third part of local diseases takes place, when a symptom of general disease, which at first arose from increased or diminished excitement (*c*),

(*b*) The excitability is here not talked of in its comparative states of abundance or deficiency, but in the degree in which any part possesses it in preference to other parts. It is used in the sense of the greater or lesser vitality of parts. Accordingly, we can say, that some parts possess an exquisite sensibility, as the stomach, the brain, and intestines, and, I believe, most of the interior, soft fleshy parts, and the shut cavities, and externally, the parts immediately under the nails; that others possess less, as the bones, ligaments, and cartilages; and externally, the cuticle, or scarf-skin. It is with respect to the difference of sensibility, or excitability, or capability to be acted upon by exciting powers, that we use the expression of more or less excitability. See above, par. 49. and the addition, and 53. and addition.

(*c*) like all the other symptoms, of which it was one,

arrives at that height of degree, at which, being no longer under the influence of excitement, it cannot be affected by remedies which correct the excitement.

693. THE fourth part, or division of local diseases, consists of those in which a contagion, externally applied to the body, is diffused over all, without affecting the excitement (*d*).

694. THE fifth part of local diseases arises from poisons which have been applied to the body, and flow through all the vessels in such a manner, that they are understood not immediately, nor at first, to have any tendency either to increase or diminish the excitement, but falling upon parts, some on one, some on another, hurt the texture of these in different manners; and, after occasioning that local hurt, by means of it produce disturbance over the rest of the body.

(*d*) If it affected the excitement, its effect would be general disease, which sometimes happens, as in the small-pox, measles, contagious typhus, and the plague.

CHAP. II.

The first Part of Organic Local Diseases, where no Effect, but in the hurt Part, arises.

695. WITH regard to the first part of local, organic diseases ; the hurting powers which produce them, are such as produce a solution of the continuity of a part, by wounding, eroding, or poisoning ; or which derange a part by contusion, compression, or spraining.

696. THE hurting powers, producing solution of continuity, are all cutting, pricking, or missive weapons. Acrid bodies and poisons produce a solution of continuity in another manner.

697. WHEN any of these hurting powers slightly divide the surface, and scarcely, or not at all, get to the bottom of the skin ; for the cure of so trifling an affection, there is occasion for nothing but shutting out the air, and cold, and excessive heat, and avoiding every irritating substance. For the only use of the cuticle is, by means of its insen-

sibility, (*a*), (it being a simple (*b*) solid, and devoid of all excitability), to keep off the air, and all excess of temperature, and every rough or rude matter, which are all inimical to living solids (*c*), whether external or internal.

698. WHEN the surface, therefore, is hurt in its texture, either by being cut, or bit, or stung by venomous animals, or by being burned, or by a very high degree of cold ; in that case, a thin, mild, oily plaster, is sufficient for the cure.

699. THE division, therefore, of phlegmasiæ, into phlegmone, or erythema, is without foundation, and misleading, both as to the cause, and as to the cure, from the knowledge of the truth (*d*): For,

(*a*) See par. 691. and the note.

(*b*) not a living,

(*c*) So hurtful is the air and temperature to all parts below the cuticle, that nothing is a more certain cause of gangrene than their exposure, even for a very short space of time : Nor is there any other way of accounting for the fatal effect of slight, superficial, but extensive burning. Death has been the consequence of a burn, which extended no further than the fore-part of the thorax, or the breast, and was not of longer continuance, than the time taken to tear off the burning clothes which occasioned it.

(*d*) See the seventh Genus in *Genera Morborum Cul-*

however much they differ in their remote cause, as they call it, and in their seat, and in their appearance ; since the exclusion of the air, and of other stimuli, is their effectual cure ; it consequently follows, that their cause is the same, that is, that the nature of all these affections is the same.

700. IN the cure of contusion, compression, and sprains (*e*), the same, in general, are the remedies ; and, besides them, there is occasion for rest of body, and bland tepid fomentations.

701. THROUGH this whole division of local affections, there is a certain energy of nature, which tends to the restoration of the healthy state ; but it is not the celebrated *vis medicatrix naturæ* of physicians : For in this case nothing else happens, but what equally happens in the cure of general diseases. If proper remedies are applied, the sound

leni, where you will find Linnæus's prototype of inflammation, that is, of inflammatory diseases, or what is, in this work, called *phlegmasiæ*, or *sthenic* diseases with inflammation, or an approach to it, also adopted by this author. It is nothing else but a collection of local affections, or, in a few cases, symptoms of disease, and that they almost all come under this head of local diseases, and every one of them under one of these heads.

(*e*) See par. 695.

state, in both sorts of diseases, follows: If the remedies be neglected, the solution of continuity degenerates into a worse and worse nature, and then into gangrene, or the death of the part (*f*). It is the excitability, or that property of life, by which the functions are produced (*g*), that, wherever life, whether in a part, or over the whole body, is hurt, procures the return of the healthy state by means

(*f*) Of this we are presented with examples in every day's experience; where we find the slightest sores, from the neglect of the simple rule of cure laid down here, degenerate into very troublesome affections.

(*g*) See above, par. 10. to 14. If I cure a peripneumony by bleeding, other evacuations, and other debilitating powers which are not evacuant, it is by diminishing the force of exciting power; if I cure a fever by opiates and other stimulant powers, whether stimulating by filling the vessels, or without that, it is by increasing the same force; and if I cure a sore on the surface, by the method just now mentioned, I thereby prevent the force of exciting power from rising too high, from an excess of stimuli, or from running either into direct or indirect debility, from too little stimulus, or an ultimate excess. If either these general or local cures are neglected, or mismanaged, the cure will not be supplied by any effort of the system; and if the cure is made out by regulating the excitement, such effort is superfluous. The *vis medicatrix*, then, is as little real in local as general diseases. See above, par. 62. and the addition. The rest of this paragraph in Latin is erased.

of the external powers acting upon it. It is, then, the excitability, affected by the action of those powers, that is to say, the excitement which governs the state of the solids, both in parts, and over the whole body.

CHAP. III.

The second Division of Local Diseases.

702. THE local organic diseases of the second division, are the inflammation of the stomach (*a*), and that in the intestines (*b*); as also bleeding discharge, with an inflammation subsequent to it; and, in fine, an inflammation in any very sensible part, in consequence of a wound, producing commotion over the whole body.

Of the Inflammation in the Stomach.

703. THE principal symptoms in gastritis are, pain in the region of the stomach, a burning heat, deep seated, increased by every thing which is either eat or drunk, or in any shape taken into the stomach; hiccup, an inclination to vomiting, and the sudden throwing up of what is taken in; and the pulse soon getting into a state of debility, quickness, swiftness, and hardishness.

(*a*) or gastritis.

(*b*) or enteritis.

704. THE exciting hurtful powers, and which produce the solution of continuity in this case, are such as act by cutting, pricking, or erosion. Such are the small bones of fishes, ground glass, or Cayenne pepper, and such like things.

705. INFLAMMATION is a consequence of the wound or erosion, which are the effect of the operation of those exciting powers: The effect of which, in the very sensible organ of the stomach, is to diffuse the disturbance before mentioned (*c*) over the whole system. The burning heat and pain, inseparable from every inflammation, and the anxiety (*d*), are the offspring of the inflammation (*e*): And, of them, the anxiety is more peculiar to the stomach, the latter being its customary seat (*f*), and the pulse becomes such as has been related, because it is peculiar to every rude, fixed, and permanent local stimulus (*g*) to weaken, and to be so much the more liable to that effect, the greater the excitability of the part is. Hence, in the external parts of the body, which are less endued with excitabili-

(*c*) See par. 691.

(*d*) See par. 171. 345.

(*e*) See par. 171.

(*f*) See par. 345.

(*g*) See par. 17. and the addition,

ty, a pretty considerable inflammation by no means affects the pulse or the body any way generally; though even there, when a part is sensible, as in the case of a burn spread to any extent, or of a thorn having been thrust under the nails, an equal disturbance arises over the whole body (*h*), which confirms a former proposition, in which it is asserted, that the more abundant the excitability is (*i*), the less stimulus can be borne (*k*).

706. THE disease is easily known, both from the symptoms above described, and, with not a little more certainty, from the hurtful powers known to have been taken in; and over and above, by this particular sign, that, as has been said before, without such marks, inflammation scarcely seizes upon an internal and shut part (*l*).

(*h*) See par. 344. 345.

(*i*) See par. 36.

(*k*) The rest of this sentence is erased, in the original, as being nonsense.

(*l*) See par. 113. and 168. The stomach is sometimes inflamed, from a scirrhus tumor occupying the pylorus; and that case also is taken in by the systematic and nosological writers, as belonging to their gastritis: But the consideration of it does not belong to this head of local diseases, but to the third division of them. At the same time, both it and the present case are local diseases, and

707. As this is a local disease, and does not, like the general ones, depend upon the increase or diminution of excitement; consequently, the indication suited to the latter, to wit, to diminish increased, or increase diminished, excitement over all, will not apply. On the contrary, unless a general disease happen to be combined with it, nothing else is to be done, but, by throwing in bland, demulcent liquors, to defend the tender part from the rude contact of the stomach's contents, and give the inflammation time to finish its course; and, if the physician is called soon enough, to wash off the hurtful matter with a diluent drink.

Of the Inflammation in the Intestines.

708. THE inflammation in the intestines is a local affection; in which there is an acute pain in the belly, and distention, and sometimes a sort of twisting of the pain around the navel, with vomit-

not phlegmasiæ, differing from the phlegmasiæ so fully treated of in the third part of this work. It, as well as enteritis, of which we are next to speak, have every mark of difference from the general diseases mentioned in the 6th paragraph. See also Chap. I. Part V.

ing, and an obstinate costiveness, and such a pulse as in the inflammation of the stomach.

709. THE hurtful powers, exciting this disease, are precisely the same as those which have been said to excite the inflammation of the stomach : that is,

710. THE inflammation arises in a similar manner, as in the inflammation of the stomach, and the more readily, that the intestines are more sensible than the stomach (*m*). And hence, also, in a similar manner, is a state of disturbance diffused over the whole body.

711. THE acute pain of the belly depends upon the inflammation : Its distention, and the costiveness, is the offspring of the detained feces. The same is the cause of the vomiting ; for the peristaltic motion being prevented, upon account of the obstruction, to proceed downward in its usual way, from its restless nature recoils in the direction upward, as affecting neither direction, unless in so far as the stimulus, by the impulse of which it is regu-

(*m*) Baron de Haller, from some experiments which he made, found the intestines more sensible than most parts of the body, more than the stomach, and equal in sensibility to the brain.

lated, either commences from above, as health requires, or from below, as happens in other diseases, and in this in particular (*n*). The pain twisting about the navel, is produced by the inflammation; for this reason, that the principal, and by far the greatest part of the intestines, is thrown in a convoluted state about the navel.

712. THE diagnosis is the same as in the gastritis; excepting, that the seeds of fruits, hairs, and similar foreign bodies, sometimes upon account of the torpor of the peristaltic motion, adhering to the sides of the intestinal canal, gradually, by their irritation, kindle up an inflammation: Which is a fact, that if examined attentively, and once rightly considered, will not disturb our diagnosis.

713. THE cure is precisely the same as in the inflammation of the stomach.

714. ALL the rest of the pretended phlegmasiæ, distinguished by the appellation of “itides,” as the splenitis (*o*), hepatitis (*p*), the true nephritis (*q*),

(*n*) See par. 188. 189.

(*o*) or inflammation of the spleen,

(*p*) or the inflammation of the liver,

(*q*) or inflammation of the kidneys,

the cystitis (*r*) without a stone, or the hysteritis, not arising from scirrhus (*s*), and the peritonitis (*t*), do not belong to this place ; as, besides the doubt of their ever being inflamed, not arising from stimulants and acids, neither of which have access to the shut viscera (for these substances are not carried in the vessels, or can be carried), but from the relics of other diseases, of which we are to speak afterwards, with the following exception :

715. THE exception is, that if one falls from a height, if he is run through any part of his bowels with a sword, if a poisoned arrow, thrown by any savage, has pierced any of his inward parts, he will, in

716. THE case of the inflammation affecting the liver, be affected with a pain in his right hypochondrium, with vomiting and hiccup : If

717. THE inflammation affect his spleen, the pain will be in his left hypochondrium : In

(*r*) or inflammation of the bladder of urine,

(*s*) or inflammation of the womb,

(*t*) or inflammation of the peritoneum,

718. THE case of the true nephritis, or inflammation of one of the kidneys, he will be pained in the region of the kidney, and seized with vomiting, and a stupor of his leg : In

719. THE case of the inflammation happening in his bladder, he will have a tumour and pain in the under belly.

720. BLEEDING discharge, followed by inflammation (*u*), such as happens in the inflammation of the womb, or of any neighbouring part, and in abortion, and in the wound of any internal part, is easily distinguished by the pain of the affected part, and by the preceding accident.

Inflammation of the Womb.

721. IN the inflammation of the womb, or any neighbouring part, the lower belly is affected with heat, tension, tumour, pain, and these symptoms accompanied with vomiting (*x*).

(*u*) See par. 702.

(*x*) The inflammation is frequently not in the womb, but in a neighbouring portion of the intestines, or mesocolon, or in the peritoneum itself, as dissection has fre-

722. THE hurtful powers which excite the hysteritis, or inflammation of the womb and parts in its neighbourhood, all amount to violence done to the womb. Thus, using violence during the labour, hurrying the birth, often produce a solution of continuity, and wound the womb with a tearing rudeness.

723. AND, since a great deal of blood is often lost in that way, and the local affection followed by debility of the whole system (*y*); for that reason, bleeding, according to the common practice, any mode of evacuation, are not to be practised, nor is the patient to be forbid to eat; but, in the first place, regard is to be had to the affected part, the body must be laid in an horizontal posture, she must be kept from motion, and be allowed rich soups and wine: By and by more solid animal food should be used, morsel by morsel, but frequently repeated, and she should have her belly bathed: And, if the debility should get a-head, recourse must be had to more wine, drink still stronger, and opi-

quently shown. This is a disease, than which none has been more inquired into, and none yet less understood.

(*y*) Pain and loss of blood are, in one degree or another, inevitable causes of debility.

ates : The use of which last should not be neglected, even at first.

Of Abortion.

724. IN abortion, the back, the loins, the belly, are pained, like what happens in child-labour ; and there is either an unusual flow of the menses, or an extraordinary discharge from the vagina.

725. THE hurtful powers, which force abortion, are, falling from a height, slipping a foot, a rash step, intense walking, running, going up and down hill. This disease seldom, however, happens but to persons previously weak ; and the most powerful agent in bringing it on, is some taint left since a former abortion, which increases in proportion to the number of abortions. When the disease happens in consequence of the local hurting powers, just now mentioned, in that case, it is perfectly local : But when debility is blended with the effect of those powers, it is a case of combination of general with local affection (z).

(z) All the words here, from “præcesserint,” in the original, are an addition. The words in the Latin are,

726. THE indication for preventing the disease is, to guard against all the hurting powers which induce the disease ; to ride out, when the patient has any degree of strength ; but, in case of any apprehension of danger from weakness, to go in a carriage, which will be more safe ; to be upon guard from the third month of pregnancy till the seventh is passed ; to invigorate the system, and keep up the patient's spirits, and intellectual amusements.

727. THE indication of cure is, to keep the body in a horizontal position, with the buttocks higher than the head ; to be studious to keep the patient easy in body and mind ; to repair the loss of blood with soups ; to secure the vessels, for the purpose of contracting their enlarged diameters, with wine and opiates, and, in that way, take off, at the same time, the atony and laxity, which are the principal cause of the discharge.

“ Qui, cum, post locales offensas, modo relatas, sine imbecillitate accidit, tum prorsus localis est ; commixta cum illis offensis imbecillitate, cum locali malo commune intermiscetur.” These are distinctions not ostentatious, not frivolous, much less misleading, but of indispensable necessity to the understanding of the subject.

Of difficult Child-labour.

728. IN difficult child-labour, the most common cause of which, by far, is weakness, and which always produces weakness when it proves lingering ; the lying-in woman should be supported with wine, and when the labour proves more difficult, and is now likely to be tedious, opium should be administered.

729. WHEN now some part of the uterus is hurt by the hurting powers which have been mentioned (*a*), and the child and placenta are now both delivered, the woman should be kept in an horizontal posture, as was recommended in abortion ; she should be invigorated by soups, chicken, wine, and the still higher stimuli ; every thing contrary should be avoided ; and the healing up of the wound waited for.

Of deep-seated Wounds.

730. IN deep-seated, or gun-shot, wounds, when the ball, if a ball occasioned the wound, is now ex-

(*a*) See par. 725.

tracted, or though it still remains in the body, in a place not necessary to life ; first of all, the whole system is very much irritated, heated, pained, chafed, and distressed with restlessness and tossing ; the pulse is strong, full, and more frequent than in health. The cause of all those symptoms is the commotion, which, as we have said, the local stimulus, either of the ball, or of the inflammation supervening upon the wound, by its constant irritation of a sensible part, gives to the whole system.

731. BECAUSE, in this case, sthenic diathesis is commonly supposed to arise over the whole body, upon account of the irritation from the wound ; the antisthenic plan of cure is, therefore, always employed through the whole course of the disease ; and the use of opium, which, in this case, is conjoined with the antisthenic, or stimulant remedies, is admitted only for the purpose of acting as a sedative, and duller of pain, is admitted : Consequently, upon account of the fear of a fever being to supervene, though often a great quantity of blood is lost by the wound ; still large bleeding is practised, the belly is purged, nourishment is withheld, abstinence enjoined. The most frequent consequence

of which treatment is death, and never a recovery, which is not owing to accident (*b*).

733. BUT all this is a method of cure conducted upon an erroneous theory, which is proved by all the principles of this doctrine, and by the very unfortunate issue of that practice. In a person, who has lost a great deal of blood, an over-proportion of blood can never be the cause of sthenic diathesis. Neither can any tolerable reason be assigned for the profuse evacuation of the serous fluid, or for not rather supplying new fluids by the use of food. It is in vain to accuse frequency of the pulse, as a sign of an excess in the quantity of blood, and of too much vigour, or of any irritation which wants an antisthenic plan of cure: For, besides its hardness, if the pulse is not, at the same time, strong and full; it has been now often above demonstrated, that all its celerity depends upon debility and penury of blood (*c*). Finally, as the sthenic diathesis depends upon the general sthenic hurtful powers, as the energy of pain, from local affection, and particularly inflammation, has no tenden-

(*b*) The words in the end of this paragraph are thus corrected, "Unde mors sæpissimè, salus, nisi casu, "nunquam."

(*c*) See par. 179. to 181.

cy to induce that diathesis, but the contrary one, of debilitating (*d*); that is another reason for the supposition of the habit either remaining such as it was before the wound was received (*e*), or, which is more probable, of its degenerating into the asthenic diathesis. Lastly, the true explanation of the distinction betwixt irritation and sthenic diathesis is in confirmation of the same conclusion; the sthenic diathesis being that state of the system, which is produced by all the powers, the operation in common to which is stimulant, over the whole system, and, by a fulness in the vessels, producing the same effect, and to be removed by debilitating powers weakening also the whole system, and by évacuant remedies acting by the same general operation; whereas, on the contrary, irritation is that state, in which the whole body is often, without any stimulus, debilitated (*f*); or often where a local

(*d*) See par. 705.

(*e*) Which can hardly happen if blood has been lost, which must diminish the excitement, and in proportion to its degree.

(*f*) When the body is debilitated, the ordinary stimuli, which in its healthy state invigorate it, and even a much less degree of stimulus, will produce the irregular motions, which are supposed to be owing to irritation; not that any thing irritating is applied, but that the excessive abundance, or defect of excitability, admits not, without such

stimulus, such as distention exciting spasm, or a concentrated acid, inducing convulsion, or the pain of a wound, producing the general commotion here (*g*), effects enormous motions in a weakened system. But, whether the debility be without stimulus, or excited by it, there is never occasion for debilitating évacuant remedies, but always for moderately stimulant ones: And we have only to take care, that the sthenic diathesis be not produced by the method employed for the cure, and thereby a general disease, at least a predisposition

effects, the degree of stimulus, which, applied to it in its healthy half-wasted state, would produce healthy and vigorous motions. (See par. 25. and 26. and the addition.) The tremors which are occasioned by the turning of a door upon its hinge, the sweat occasioned by slight exertions in walking, are so many instances of that, and the irregularities of the pulse are owing to the same cause. As the weakness, upon which fevers depend, increases, so also do the supposed symptoms of irritation; such as colliquative sweats, colliquative diarrhæa, subsultus tendinum, &c. But they are all the effect of the general weakened state being fluttered by very slight stimuli. At other times irritating powers, in the same weakened state, do occur; such as those mentioned in the text.

(*g*) But, even in that case, the real state is debility, and the indication of cure is to remove it, as well as the irritating powers: Which, while they increase it, are, at the same time, its offspring, and require stimulants to enable the system to resist the effect. (688.)

to general disease, superadded to the local, which could not fail to aggravate the latter.

733. As, therefore, the antisthenic plan of cure is not to be practised, from an apprehension of a fever being about to come on, with a view to allay the disturbance arising from it; which has the contrary tendency, that of inducing the fever, and of exciting the disturbance apprehended; so, neither is the stimulant plan to be attempted, till the wound is healed, or the disease has arrived at an advanced stage, and a great deal of debility is now induced by the continuance of the pain, lest, if that method should be sooner employed, the blood should be carried with more rapidity than the case would admit of, and with an increased momentum, into the still open terminations of the vessels: For it is understood, that neither diathesis takes place in this case, and that the only affection present is a commotion over the system, depending upon local affection, and that, consequently, there is no occasion for the remedies of either; excepting this single consideration, that, as the loss of blood, in proportion to its degree, has a tendency to produce more or less of asthenic diathesis; there will, therefore, in that proportion, be occasion for some sthenic remedies.

734. DURING the first days of the disease, because the patient, all at once, does not any longer engage in gestation, exercise, and the other functions, both of body and mind, and of passion or emotion, according to custom, and, of course, less nourishment and recruit is now required; therefore, there should be such an abatement in his allowance, of the usual stimuli, as to accommodate what is used to the present condition of the system, and the state of the wound just now described (*b*). Therefore, to prevent too great an impetus in the vessels, silence should be kept around the patient, he should not speak himself, he should lie quiet and without motion, his posture should not be changed but to avoid the disagreeable feeling of too long continuance of it, and even then it should be done as warily as possible. He should make his water lying, and in an urinal; he should rather use soups than solid meat; his wound should be examined every day, for the sake of keeping it clean; its progress should be observed; it should be dressed with fresh, soft, and bland matter; and if, even at this early period, any faintishness appears, a glass of wine should not be withheld. -

(*b*) See last paragraph.

735. AFTER some days, which may be more or fewer, according to the strength of the patient, when now the habit is rushing into debility, upon account of the greatness or long continuance of the pain; in that case, besides the soups formerly allowed, meat as rich and delicate as possible should be given; wine should be administered sparingly at a time, but often, and, upon the whole, in large quantity; and then, at last, recourse should be had to opium, which, in the common practice, is usually given from the beginning of the disease, and to the other diffusible stimuli; and the disease should be treated precisely in the same way as a typhus.

736. WHEN very tender external parts are violated by any rude matter, such as happens in that case, where a thorn is pushed under any of the nails, and an inflammation spreads from the affected part to a considerable extent, and then, upon account of the great sensibility of the part, the whole body is drawn into consent; the injured part should be fomented with warm water, and dressed with lint, and soft, and bland ointment. And, as long as the disturbance of the system remains, the patient should be kept quiet, and free from motion, and nothing more attempted.

CHAP. IV.

Of a Part of a General Disease, degenerating into a Local.

737. To set about the treatment of that division of local, organic diseases, in which a part, or symptom, of general disease degenerates into a local one; we next proceed to

Suppuration.

738. SUPPURATION, with which we begin, is, for the most part, a consequence of any general inflammation, whether sthenic or asthenic, or that inflammation, which is a symptom of general disease, or it is a consequence of local inflammation, whether sthenic or asthenic, as a symptom of local affection. In it, the pulse is softer, fuller, and a little slower, than in sthenic disease, when that precedes it; but a great deal slower than in asthenic disease, if it happen to supervene upon it, and it is accompanied with an undulatory, and, as it were, a pulsatory, motion of the labouring part; these symp-

toms are commonly preceded by a shivering: If the affection is internal, the patient should be kept quiet, and free from motion, and be stimulated; if it be external, the affected part should, over and above, be fomented, dressed, and covered, and the pus, when ripe, let out.

Of Pustules.

739. A PUSTULE is a purulent vesicle, turgid, and at last, of its own accord, opening, in consequence of having become tender, and full of pus.

740. IT follows the small-pox, arising from the contagion peculiar to that disease. In the small-pox, the number of the pustules is greater or less, in proportion as more or less sthenic diathesis, occasioned by improper treatment, or a neglect of the proper, has preceded (*a*).

741. THE indication of cure for them is, first, to remove sthenic diathesis, and then, if that has passed into the asthenic, to remove it, each by its respective remedies; and to besprinkle the pustules

(*a*) See par. 21. 76. 96. 97. 98.

with a strong spirit, or with laudanum ; and, in the former case, to guard against cold, in the latter, against heat, and to open the pustules and foment them.

Of Anthrax.

742. ANTHRAX is a glandular tumour under the skin, gangrenous in the top, and inflamed in its edges all round.

Of Bubo.

743. BUBO is a glandular tumour, especially affecting the one or the other groin, and of a tendency to suppuration.

744. THESE two affections, the anthrax and bubo, as well as carbuncle, are almost always combined with a general disease, to wit, sometimes with typhus, much oftener with the plague. They depend upon a contagious matter, and, in so far as they do not sufficiently yield to the general remedies, they must be treated with a very strong spirit poured upon them, and with laudanum, and opening them.

Of Gangrene.

745. GANGRENE is an imperfect inflammation of a part, not terminating in suppuration, discoloured, scarcely painful, consisting of pustules of a bad matter, and, at last, inducing the death of the part.

746. THE hurtful power which precedes gangrene, is always inflammation, often ultimately violent in a sensible part, oftener languid, and occupying a part less sensible, less supported by the powers of life (*b*); it is sometimes a symptom of the phlegmasiæ, sometimes of fevers, sometimes of local phlegmone (*c*).

747. THE method of cure, when the gangrene is seated in the alimentary canal, is to pour in spirit and laudanum; when the shut viscera are affected, to place some hope in the same and other stimuli, but much less. And, as the same remedies also suit gangrene, when it is external, consequently li-

(*b*) The inflammation, out of which gangrene arises, is always unsupported, and the gangrene always a state of either direct or indirect debility; the high excitement in the phlegmasiæ, and the low in fevers, causing that,

(*c*) See par. 347. 650. to 689.

752. THE two heads of division which remain (*e*), are of so obscure and abstract a nature, that, if ever they are to be attempted, they must be passed over at present. The third head (*f*) is here only imperfectly sketched, and scarcely begun: But, because it both admits of a complete execution, and, when so executed, will make an important addition to the work; it shall be prepared for the public perusal, as soon as I shall be happy enough to find as much leisure and scope for thinking, as are requisite to rescue the subject from its present intricacy, disorder, and obscurity.

(*e*) See par. 693. and 694.

(*f*) See par. 692. 737. to 752.

FINIS.

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THE ELEMENTS.

[*The references are to the paragraphs, except where the numerals refer to the pages of The Author's Preface, which is intimated.*]

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FINIS.



